SHOUT
SHARE
IT
WAKE

RD & W 1997

The Bulletin of Zoological Nomenclature

ICZN The Official Periodical of the International Commission on Zoological Nomenclature

Volume 51, 1994

Published on behalf of the Commission by
The International Trust for Zoological Nomenclature
c/o The Natural History Museum
Cromwell Road
London, SW7 5BD, U.K.

ISSN 0007-5167
© International Trust for Zoological Nomenclature

The
Bulletin
of
Zoological
Nomenclature

TABLE OF CONTENTS

Page

Notices 1
The International Commission on Zoological Nomenclature and its publications . 2
Addresses of members of the Commission 3
International Trust for Zoological Nomenclature. 4
Fourth Edition of the International Code of Zoological Nomenclature 5
The International Code of Zoological Nomenclature 5
Official Lists and Indexes of Names and Works in Zoology — Second Supplement to 1990 6
The European Association for Zoological Nomenclature. 6

Applications

Doris grandiflora Rapp, 1827 (currently *Dendrodoris grandiflora*; Mollusca, Gastropoda): proposed conservation of the specific name. J. Ortea & Á. Valdés. 7
Johnstonia Quatrefages, 1866 (Annelida, Polychaeta): proposed conservation. A.S.Y. Mackie & J. Gobin 10
Mastotermes darwiniensis Froggatt, 1897 and *Termes meridionalis* Froggatt, 1898 (currently *Amitermes meridionalis*) (Insecta, Isoptera): proposed retention of neotypes following rediscovery of syntypes. J.A.L. Watson 14
COLYDIIDAE Erichson, 1842 (Insecta, Coleoptera): proposed precedence over CERYLONIDAE Billberg, 1820 and ORTHOCERINI Blanchard, 1845 (1820); and *Cerylon* Latreille, 1802: proposed conservation of *Lyctus histeroides* Fabricius, 1792 as the type species. H. Silfverberg 17
Cryptophagus Herbst, 1792, *Dorcatoma* Herbst, 1792, *Rhizophagus* Herbst, 1793 and *Colon* Herbst, 1797 (Insecta: Coleoptera): proposed conservation as the correct spellings, and proposed conservation of *Lyctus bipustulatus* Fabricius, 1792 as the type species of *Rhizophagus*. H. Silfverberg 21
ELMIDAE Curtis, 1830 and *Elmis* Latreille, 1802 (Insecta, Coleoptera): proposed conservation as correct spelling and of feminine gender respectively. M.A. Jäch . 25
Hydrophoria Robineau-Desvoidy, 1830 (Insecta, Diptera): proposed designation of *Musca lancifer* Harris, [1780] as the type species. G.C.D. Griffiths 28
Sicus Scopoli, 1763 and *Myopa* Fabricius, 1775 (Insecta, Diptera): proposed conservation by the designation of *Conops buccata* Linnaeus, 1758 as the type species of *Myopa*. S. Camras 31
Alestes Müller & Troschel, 1844 (Osteichthyes, Characiformes): conservation proposée. J. Géry & V. Mahnert 35

Comments

On the proposed stabilization of usage of the name *Ceratites nodosus* (Mollusca, Ammonoidea). G. Hahn 41
On the proposed conservation of the specific name of *Notonecta obliqua* Thunberg, 1787 (Insecta, Heteroptera). I.M. Kerzhner; A. Jansson 41
On the proposed conservation of usage of some generic names in the BUPRESTIDAE (Insecta, Coleoptera). H. Mühle; R.L. Westcott; G.H. Nelson. 43
On the proposed conservation of the specific name of *Rivulus marmoratus* Poey, 1880 (Osteichthyes, Cyprinodontiformes). W.J.E.M. Costa; K.J. Lazara & M.L. Smith 46
On the proposed designation of a neotype for *Coelophysis bauri* (Cope, 1887) (Reptilia, Saurischia). S.P. Welles; G. Olshevsky; E.L. Nicholls; L.L. Jacobs; D.F. Glut; A. de Ricqlès; P.K. Tubbs 48

On the proposed conservation of *Emys* Duméril, 1806 (Reptilia, Testudines). H.M. Smith 52
On the proposed conservation of the subspecific name of *Catharacta antarctica lonnbergi* Mathews, 1912 (currently *Catharacta skua lonnbergi*; Aves, Charadriiformes). J.-F. Voisin, C. Voisin, W.J. Bock & M. Théry 52

Rulings of the Commission

OPINION 1752. *Zanclea costata* Gegenbaur, 1856 (Cnidaria, Hydrozoa): generic and specific names conserved 54
OPINION 1753. *Gebia major capensis* Krauss, 1843 (currently *Upogebia capensis*; Crustacea, Decapoda): neotype replaced, so conserving the usage of *G. capensis* and also that of *G. africana* Ortmann, 1894 (currently *Upogebia africana*) . . . 56
OPINION 1754. *Histoire abrégée des insectes qui se trouvent aux environs de Paris* (Geoffroy, 1762): some generic names conserved (Crustacea, Insecta) 58
OPINION 1755. *Podisus* Herrich-Schaeffer, 1851 (Insecta, Heteroptera): *P. vittipennis* Herrich-Schaeffer, 1851 designated as the type species 71
OPINION 1756. ANTHRIBIDAE Billberg, 1820 (Insecta, Coleoptera): given precedence over CHORAGIDAE Kirby, 1819 72
OPINION 1757. *Cryptus* Fabricius, 1804 and CRYPTINAE Kirby, 1837 (Insecta, Hymenoptera): conserved 74
OPINION 1758. *Vipio* Latreille, 1804 (Insecta, Hymenoptera): *Agathis longicauda* Boheman, 1853 designated as the type species 76
OPINION 1759. *Acamptopoeum* Cockerell, 1905 (Insecta, Hymenoptera): *Camptopoeum submetallicum* Spinola, 1851 designated as the type species 79
OPINION 1760. *Rhipidocystis* Jaekel, 1901 (Echinodermata, Eocrinoidea): *R. baltica* Jaekel, 1901 designated as the type species 80
OPINION 1761. *Filimanus* Myers, 1936 (Osteichthyes, Perciformes): *Filimanus perplexa* Feltes, 1991 designated as the type species 81
OPINION 1762. *Cynolebias opalescens* Myers, 1942 and *C. splendens* Myers, 1942 (Osteichthyes, Cyprinodontiformes): specific names conserved 82
OPINION 1763. *Megophrys montana* Kuhl & van Hasselt, 1822 (Amphibia, Anura): generic and specific names placed on Official Lists, and *Leptobrachium parvum* Boulenger, 1893 (currently *Megophrys parva*): specific name conserved 84
OPINION 1764. *Anas arcuata* Horsfield, 1824 (currently *Dendrocygna arcuata*; Aves, Anseriformes): specific name conserved 86

Information and Instructions for Authors 88

Notices 89
Fourth Edition of the International Code of Zoological Nomenclature 90
The International Code of Zoological Nomenclature 90
Official Lists and Indexes of Names and Works in Zoology — Second Supplement to 1990 90
Bulletin of Zoological Nomenclature — Back Copies 91
Bulletin of Zoological Nomenclature — Crustacea and Mollusca Offprints 91
The European Association for Zoological Nomenclature 91

General Article

Towards a polynomial system of zoological nomenclature? A response to the proposals of D.S. Yu (1993). E.E. Spamer & A.E. Bogan 92

Applications

Fursenkoina Loeblich & Tappan, 1961 (Foraminiferida): proposed conservation. S.A. Revets 98

Chromadora Bastian, 1865 and *Euchromadora* de Man, 1886 (Nematoda): proposed conservation of usage by the designation of *C. nudicapitata* Bastian, 1865 as the type species of *Chromadora*. P.A.A. Loof. 102

Xerophila geyeri Soós, 1926 (currently *Trochoidea geyeri*; Mollusca, Gastropoda): proposed conservation of the specific name. E. Gittenberger 105

A.A.H. Lichtenstein's (1796, 1797) *Catalogus musei zoologici . . . Sectio tertia. Continens Insecta* and D.H. Schneider's (1800) *Verzeichniss einer Parthei Insekten . . .*: proposed suppression, with conservation of some Lichtenstein (1796) names (Insecta and Arachnida). I.M. Kerzhner 108

Bhatia Distant, 1908 (Insecta, Homoptera): proposed confirmation of *Eutettix? olivaceus* Melichar, 1903 as the type species. M.D. Webb 116

Rhopalosiphum monardae Davis, 1911 (currently *Hyalomyzus monardae*; Insecta, Homoptera): proposed conservation of the specific name. D.J. Voegtlin 118

Scarabaeus rufus Moll, 1782 (currently *Aphodius rufus*), *Scarabaeus rufus* Fabricius, 1792 (currently *Aegialia rufa*) and *Scarabaeus foetidus* Herbst, 1783 (currently *Aphodius foetidus*) (Insecta, Coleoptera): proposed conservation of usage of the specific names. F.-T. Krell, Z. Stebnicka & E. Holm 121

Ischyrus Lacordaire, 1842, *Lybas* Lacordaire, 1842, *Mycotretus* Lacordaire, 1842 and *Megischyrus* Crotch, 1873 (Insecta, Coleoptera): proposed conservation. P.E. Skelley & M.A. Goodrich. 128

Lithobius piceus L. Koch, 1862 (Chilopoda): proposed conservation of the specific name. E.H. Eason 133

Regnum Animale . . ., Ed. 2 (M.J. Brisson, 1762): proposed rejection, with the conservation of the mammalian generic names *Philander* (Marsupialia), *Pteropus* (Chiroptera), *Glis*, *Cuniculus* and *Hydrochoerus* (Rodentia), *Meles*, *Lutra* and *Hyaena* (Carnivora), *Tapirus* (Perissodactyla), *Tragulus* and *Giraffa* (Artiodactyla). A. Gentry 135

Comments

On the proposed attribution of the specific name of *Ceratites nodosus* to Schlotheim, 1813, and the proposed designation of a lectotype (Cephalopoda, Ammonoidea). E.T. Tozer 147

On the proposed conservation of *Hydromantes* Gistel, 1848 by the designation of *Salamandra genei* Temminck & Schlegel, 1838 as the type species (Amphibia, Caudata). M.R. Jennings; H.A. Dundee; G. Mancino; B. Lanza; R.G. Webb; M.G. Paris; W.R. Branch; D.A. Good; R.F. Inger; D.M. Hillis; F.R. Cook; R.C. Stebbins; M.J. Cox *et al.* 149

On the proposed conservation of HEMIDACTYLIINI Hallowell, 1856 (Amphibia, Caudata). R.G. Webb; H.A. Dundee; M.G. Paris; M.J. Cox; R.A. Thomas; D.M. Hillis; F.R. Cook; H. Ota; P. Chippindale; R.C. Stebbins *et al.* 153

On the proposed designation of a neotype for *Coelophysis bauri* (Cope, 1887) (Reptilia, Saurischia). P. Huber 156

Rulings of the Commission

OPINION 1765. *Fusus* Helbling, 1779 (Mollusca, Gastropoda): suppressed, and *Fusinus* Rafinesque, 1815 and *Colubraria* Schumacher, 1817: conserved 159

OPINION 1766. *Tortaxis* Pilsbry, 1906 and *Allopeas* Baker, 1935 (Mollusca, Gastropoda): conserved by the designation of a neotype for *Achatina erecta* Benson, 1842 162

OPINION 1767. *Pleurobranchus forskalii* Rüppell & Leuckart, [1828] and *P. testudinarius* Cantraine, 1835 (Mollusca, Gastropoda): specific names conserved . 164

OPINION 1768. *Taningia danae* Joubin, 1931 (Mollusca, Cephalopoda): given precedence over *Octopodoteuthis persica* Naef, 1923 166
OPINION 1769. *Styloptocuma* Băcescu & Muradian, 1974 (Crustacea, Cumacea): conserved with *S. antipai* Băcescu & Muradian, 1974 designated as the type species 168
OPINION 1770. *Pachyrhynchus* Germar, 1824, *Somatodes* Schönherr, 1840 and the specific name of *Pachyrhynchus moniliferus* Germar, 1824 (Insecta, Coleoptera): conserved 170
OPINION 1771. *Cryptophagus advena* Waltl, 1834 (currently *Ahasverus advena*; Insecta, Coleoptera): specific name conserved 172
OPINION 1772. METOPIINI Raffray, 1904 (Insecta, Coleoptera): spelling emended to METOPIASINI, and METOPIINI Townsend, 1908 (Insecta, Diptera): spelling emended to METOPIAINI, so removing the homonymy with METOPIINAE Foerster, [1869] (Insecta, Hymenoptera) 174
OPINION 1773. *Nacaduba* Moore, [1881] (Insecta, Lepidoptera): given precedence over *Pepliphorus* Hübner, [1819] 176
OPINION 1774. *Catocala connubialis* Guenée, 1852 (Insecta, Lepidoptera): specific name conserved 178
OPINION 1775. *Banksinella luteolateralis* var. *albothorax* Theobald, 1907 (currently *Aedes* (*Neomelaniconion*) *albothorax*), *B. luteolateralis* var. *circumluteola* Theobald, 1908 (currently *A.* (*N.*) *circumluteolus*) and *A.* (*N.*) *mcintoshi* Huang, 1985 (Insecta, Diptera): specific names conserved, and *A.* (*N.*) *albothorax*: neotype designated. 179
OPINION 1776. *Rana megapoda* Taylor, 1942 (Amphibia, Anura): specific name conserved 181
OPINION 1777. *Anisolepis grilli* Boulenger, 1891 (Reptilia, Squamata): specific name conserved 182

Information and Instructions for Authors 184

Notices 185
Fourth Edition of the International Code of Zoological Nomenclature 186
The International Code of Zoological Nomenclature 186
Official Lists and Indexes of Names and Works in Zoology — Second Supplement to 1990 186
Bulletin of Zoological Nomenclature — Back Copies 187
Bulletin of Zoological Nomenclature — Crustacea and Mollusca Offprints . . . 187
The European Association for Zoological Nomenclature. 187

Conference Report
Report of the IUBS/IUMS exploratory meeting on harmonization between Codes of Nomenclature. Editors: D.L. Hawksworth, J. McNeill, P.H.A. Sneath, R.P. Trehane & P.K. Tubbs. 188

Applications
Nesopupa Pilsbry, 1900 (Mollusca, Gastropoda): proposed conservation. R.H. Cowie, C.C. Christensen & N.L. Evenhuis 217
Acanthoteuthis Wagner *in* Münster, 1839 and *Kelaeno* Münster, 1842 (Mollusca, Cephalopoda): proposed conservation of usage. D.T. Donovan 219
Lironeca Leach, 1818 (Crustacea, Isopoda): proposed conservation as the correct spelling. E.H. Williams & T.E. Bowman 224
Oniscus asellus Linnaeus, 1758 (Crustacea, Isopoda): proposed designation of a neotype. D.T. Bilton. 227

MEGALODONTIDAE Morris & Lycett, 1853 (Mollusca, Bivalvia) and MEGALODONTIDAE Konow, 1897 (Insecta, Hymenoptera): proposed removal of homonymy. N.D. Springate 230

Apis terrestris Linnaeus, 1758, *A. muscorum* Linnaeus, 1758 and *A. lucorum* Linnaeus, 1761 (currently *Bombus terrestris*, *B. muscorum* and *B. lucorum*) and *Bombus humilis* Illiger, 1806 (Insecta, Hymenoptera): proposed conservation of usage of the specific names. A. Løken, A. Pekkarinen & P. Rasmont 232

CAECILIIDAE Rafinesque-Schmaltz, 1814 (Amphibia, Gymnophiona) and CAECILIIDAE Kolbe, 1880 (Insecta, Psocoptera): proposed removal of the homonymy by the revocation of Opinion 1462 and the adoption of the spelling CAECILIUSIDAE for the psocopteran family name. M.H. Wake, A. Dubois, D.R. Frost, T.E. Moore & R.A. Nussbaum 237

PHRYNOBATRACHINAE Laurent, 1941 (Amphibia, Anura): proposed conservation. A. Dubois 240

Plesiosaurus rugosus Owen, 1840 (currently *Eretmosaurus rugosus*; Reptilia, Plesiosauria): proposed designation of a neotype. D.S. Brown & N. Bardet . . 247

Coluber poecilogyrus Wied-Neuwied, [1824] (currently *Liophis poecilogyrus*) (Reptilia, Serpentes): proposed conservation of the specific name. H.M. Smith, J.R. Dixon & V. Wallach 250

Psittacus banksii Latham, 1790 and *P. lathami* Temminck, 1807 (currently *Calyptorhynchus banksii* and *C. lathami*; Aves, Psittaciformes): proposed conservation of the specific names. R. Schodde & W.J. Bock 253

Comments

On the proposed conservation of the specific name of *Doris grandiflora* Rapp, 1827 (currently *Dendrodoris grandiflora*; Mollusca, Gastropoda). R.C. Willan & R. Burn 256

On the proposed conservation as the correct spelling of *Cryptophagus* Herbst, 1792, *Dorcatoma* Herbst, 1792, *Rhizophagus* Herbst, 1793 and *Colon* Herbst, 1797 and the proposed conservation of *Lyctus bipustulatus* Fabricius, 1792 as the type species of *Rhizophagus* (Insecta, Coleoptera). R.G. Booth 256

On the proposed conservation of ELMIDAE Curtis, 1830 as the correct spelling and of the feminine gender of *Elmis* Latreille, 1802 (Insecta, Coleoptera). G.N. Foster . 257

On the proposed designation of the type species of *Hydrophoria* Robineau-Desvoidy, 1830 (Insecta, Diptera). C.W. Sabrosky; R.W. Crosskey 258

On the proposed conservation of *Sicus* Scopoli, 1763 and *Myopa* Fabricius, 1775 by the designation of *Conops buccata* Linnaeus, 1758 as the type species of *Myopa* (Insecta, Diptera), and on the proposed rejection of *Coenomyia* Latreille, 1796. C.W. Sabrosky; T.A. Wheeler 259

On the proposed conservation of the specific name of *Cliola* (*Hybopsis*) *topeka* Gilbert, 1884 (currently *Notropis topeka*) (Osteichthyes, Cypriniformes). R.L. Mayden; R.M. Bailey 262

On the proposed conservation of HEMIDACTYLIINI Hallowell, 1856 (Amphibia, Caudata). A. Dubois 264

On the proposed designation of a neotype for *Coelophysis bauri* (Cope, 1887) (Reptilia, Saurischia). S.G. Lucas & A.P. Hunt 265

On the proposed conservation of some mammal generic names first published in Brisson's (1762) *Regnum Animale*. J.E. Hill; D.W. Yalden; W.F.H. Ansell . . . 266

Rulings of the Commission

OPINION 1778. *Acineta* Ehrenberg, [1834] and *Tokophrya* Bütschli, 1889 (Ciliophora, Suctoria): conserved, and *Acineta tuberosa* Ehrenberg, [1834] and *Podophrya quadripartita* Claparède & Lachmann, 1859 (currently *Tokophrya quadripartita*): specific names conserved 268

OPINION 1779. *Potamolithus* Pilsbry & Rush, 1896 (Mollusca, Gastropoda): placed on the Official List with *Paludina lapidum* d'Orbigny, 1835 as the type species . 271
OPINION 1780. *Turbo politus* Linnaeus, 1758 (currently *Melanella polita*; Mollusca, Gastropoda): usage of the specific name conserved, so conserving the specific name of *Buccinum acicula* Müller, 1774 (currently *Cecilioides acicula*) 273
OPINION 1781. *Termes lacteus* Froggatt, 1898 (currently *Coptotermes lacteus*; Insecta, Isoptera): specific name conserved 275
OPINION 1782. *Corisa nigrolineata* Fieber, 1848 (currently *Sigara* (*Pseudovermicorixa*) *nigrolineata*; Insecta, Heteroptera): specific name conserved 277
OPINION 1783. *Aradus caucasicus* Kolenati, 1857 (Insecta, Heteroptera): syntype replaced by a neotype, so conserving the usage of the specific name and that of *A. hieroglyphicus* Sahlberg, 1878 279
OPINION 1784. *Buprestis* Linnaeus, 1758 and *Chrysobothris* Eschscholtz, 1829 (Insecta, Coleoptera): conserved by the designation of *Buprestis octoguttata* Linnaeus, 1758 as the type species of *Buprestis*, and *Chrysobothris* and *Dicerca* Eschscholtz, 1829: conserved as the correct original spellings 280
OPINION 1785. *Dytiscus biguttatus* Olivier, 1795 (currently *Agabus biguttatus*; Insecta, Coleoptera): specific name conserved 283
OPINION 1786. *Ascopora* Trautschold, 1876 (Bryozoa, Cryptostomata): *Ceriopora nodosa* Fischer von Waldheim, 1837 designated as the type species 285
OPINION 1787. *Mugil curema* and *M. liza* Valenciennes *in* Cuvier & Valenciennes, 1836 (Osteichthyes, Perciformes): specific names conserved 286
OPINION 1788. Scelidosaurus harrisonii Owen, 1861 (Reptilia, Ornithischia): lectotype replaced 288
OPINION 1789. Pseudoxyrhopus Günther, 1881 (Reptilia, Serpentes): conserved . 289
OPINION 1790. *Lagomeryx* Roger, 1904 (Mammalia, Artiodactyla): *Lagomeryx ruetimeyeri* Thenius, 1948 designated as the type species 290
OPINION 1791. *Procervulus* Gaudry, 1877 (Mammalia, Artiodactyla): *Antilope dichotoma* Gervais, 1849 designated as the type species 291

Information and Instructions for Authors 292

Notices 293
Fourth Edition of the International Code of Zoological Nomenclature 294
The International Code of Zoological Nomenclature 294
Official Lists and Indexes of Names and Works in Zoology — Second Supplement to 1990 294
Bulletin of Zoological Nomenclature — Back Copies 295
Bulletin of Zoological Nomenclature — Crustacea and Mollusca Offprints 295
The European Association for Zoological Nomenclature 295
Financial Report for 1993 296

Applications
Valdivianemertes Stiasny-Wijnhoff, 1923 (Nemertea): proposed conservation. F.B. Crandall 298
Vejdovskyella Michaelsen, 1903 (Annelida, Oligochaeta): proposed precedence over *Macrochaetina* Bretscher, 1899. T. Timm 302
Scottia Brady & Norman, 1889 (Crustacea, Ostracoda): proposed designation of *Scottia pseudobrowniana* Kempf, 1971 as the type species. E.K. Kempf 304
Temnorhynchus Hope, 1837 (Insecta, Coleoptera): proposed conservation. F.-T. Krell 306

BRACHYPTERINAE Erichson, 1845 (Insecta, Coleoptera) and BRACHYPTERINAE Zwick, 1973 (Insecta, Plecoptera): proposed removal of homonymy. P.A. Audisio, R. Fochetti & P. Zwick 309
Sphaerocera Latreille, 1804 and *Borophaga* Enderlein, 1924 (Insecta, Diptera): proposed conservation; *Sphaerocera curvipes* Latreille, 1805 and *Phora flavimana* Meigen, 1830: proposed conservation of the specific names. B.V. Brown & C.W. Sabrosky 312
Coproica Rondani, 1861 and *Ischiolepta* Lioy, 1864 (Insecta, Diptera): proposed conservation of usage by the designation of *Limosina acutangula* Zetterstedt, 1847 as the type species of *Coproica*. T.A. Wheeler & J.E. Swann 316
Bagrus hoevenii Bleeker, 1846 (currently *Hemibagrus hoevenii*; Osteichthyes, Siluriformes): proposed designation of a neotype. M. Kottelat, K.K.P. Lim & P.K.L. Ng. 320
Scomber dentex Bloch & Schneider, 1801 (currently *Caranx* or *Pseudocaranx dentex*) and *Caranx lugubris* Poey, [1860] (Osteichthyes, Perciformes): proposed conservation of the specific names. W.F. Smith-Vaniz & J.E. Randall 323
Lycognathophis Boulenger, 1893 (Reptilia, Serpentes): proposed conservation. H.M. Smith & V. Wallach 330
Loris E. Geoffroy Saint-Hilaire, 1796 (Mammalia, Primates): proposed conservation. A. Gentry, C.P. Groves, J.E. Hill & P.D. Jenkins 332

Comments

On the proposed conservation of the specific name of *Xerophila geyeri* Soós, 1926 (Mollusca, Gastropoda). P. Bouchet; E. Gittenberger 336
On the proposed conservation of *Clavella* Oken, 1815 and *Pennella* Oken, 1815 (Crustacea, Copepoda). D.W. Rice; A. Gentry. 338
On the proposed suppression of the catalogues of A.A.H. Lichtenstein (1796, 1797) and D.H. Schneider (1800), with the conservation of some Lichtenstein (1796) names (Insecta and Arachnida). R.D. Pope 339
On the proposed conservation of the specific names of *Aphodius rufus* (Moll, 1782), *A. foetidus* (Herbst, 1783) and *Aegialia rufa* (Fabricius, 1792) (Insecta, Coleoptera). G. Dellacasa. 340
On the proposed conservation of the specific name of *Lithobius piceus* L. Koch, 1862 (Chilopoda). A. Minelli 341
On the proposed conservation of HEMIDACTYLIINI Hallowell, 1856 (Amphibia, Caudata). H.M. Smith & D.B. Wake 341
On the proposed conservation of some mammal generic names first published in Brisson's (1762) *Regnum Animale*. C.P. Groves; D.E. Wilson; R.S. Voss; J.H. Wahlert; P.A. Morris; S. Anderson; P. Grubb; D.L. Harrison & P.J.J. Bates; Z. Pucek 342

Indexes, etc.

Authors in volume 51 (1994) 349
Names and works placed on Official Lists and Indexes in rulings of the Commission published in volume 51 (1994) 351
Key names and works in Applications and Comments published in volume 51 (1994). 357
Instructions to authors 363
Publication dates and pagination of volume 51 (1994) 364
Instructions to binder 364
Table of Contents of volume 51 (1994) I

Volume 51, Part 1, 30 March 1994 pp. 1–88 ISSN 0007–5167

THE NATURAL HISTORY MUSEUM
31 MAR 1994
PURCHASED
ZOOLOGY LIBRARY

The Bulletin of Zoological Nomenclature

ICZN The Official Periodical of the International Commission on Zoological Nomenclature

THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

The *Bulletin* is published four times a year for the International Commission on Zoological Nomenclature by the International Trust for Zoological Nomenclature, a charity (no. 211944) registered in England. The annual subscription for 1994 is £85 or $165, postage included. All manuscripts, letters and orders should be sent to:

The Executive Secretary,
International Commission on Zoological Nomenclature,
c/o The Natural History Museum,
Cromwell Road,
London, SW7 5BD, U.K. (Tel. 071-938 9387)

INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Officers

President	Prof Dr O. Kraus (*Germany*)
Vice-President	Dr H. G. Cogger (*Australia*)
Secretary-General	Dr I. W. B. Nye (*United Kingdom*)
Executive Secretary	Dr P. K. Tubbs (*United Kingdom*)

Members

Dr F. M. Bayer (*U.S.A.: Corallia*)
Prof W. J. Bock (*U.S.A.; Ornithology*)
Dr P. Bouchet (*France; Mollusca*)
Dr L. R. M. Cocks (*U.K.; Brachiopoda*)
DrH.G.Cogger (*Australia; Herpetology*)
Prof J. O. Corliss (*U.S.A.; Protista*)
Prof C. Dupuis (*France; Heteroptera*)
Prof Dr G. Hahn (*Germany; Trilobita*)
Prof Dr O. Halvorsen (*Norway; Parasitology*)
Mr D. Heppell (*U.K.; Mollusca*)
Prof L. B. Holthuis (*The Netherlands; Crustacea*)
Dr Z. Kabata (*Canada; Copepoda*)
Prof Dr O. Kraus (*Germany; Arachnology*)
Dr P. T. Lehtinen (*Finland; Arachnology*)
Dr E. Macpherson (*Spain; Crustacea*)
Dr V. Mahnert (*Switzerland; Ichthyology*)
Prof U. R. Martins de Souza (*Brazil; Coleoptera*)
Prof A. Minelli (*Italy; Myriapoda*)
Dr C. Nielsen (*Denmark; Bryozoa*)
Dr I. W. B. Nye (*U.K.; Lepidoptera*)
ProfW.D.L.Ride(*Australia; Mammalia*)
Prof J. M. Savage (*U.S.A; Herpetology*)
Prof Dr R. Schuster (*Austria; Acari*)
Dr Y. I. Starobogatov (*Russia; Mollusca*)
Dr P. Štys (*Czech Republic; Heteroptera*)
Dr F. C. Thompson (*U.S.A.; Diptera*)
Dr V. A. Trjapitzin (*Russia; Hymenoptera*)
Dr Shun-Ichi Uéno (*Japan; Entomology*)
Prof A. Willink (*Argentina; Hymenoptera*)

Secretariat

Dr P. K. Tubbs (*Executive Secretary and Editor*)
Mr J. D. D. Smith, B.Sc., B.A. (*Scientific Administrator*)
Mrs A. Gentry, B.Sc. (*Zoologist*)

Officers of the International Trust for Zoological Nomenclature

Dr S. Conway Morris, F.R.S. (*Chairman*)
Dr M. K. Howarth (*Secretary and Managing Director*)

© International Trust for Zoological Nomenclature 1994

HISTORY MUSEUM
31 MAR 1994
PURCHASED
ZOOLOGY LIBRARY

BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 51, part 1 (pp. 1–88) 30 March 1994

Notices

(a) *Invitation to comment.* The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles.* At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications.* The following new applications have been received since going to press for volume 50, part 4 (published on 16 December 1993). Under Article 80 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) *Borophaga* Enderlein, 1924 (Insecta, Diptera): proposed conservation. (Case 2907). B.V. Brown & C.W. Sabrosky.

(2) *Vejdovskyella* Michaelson, 1903 (Annelida, Oligochaeta): proposed precedence over *Macrochaetina* Bretscher, 1899. (Case 2908). T. Timm.

(3) *Armadillo*: proposed suppression as a scientific name, and consequences for the nomenclature of conglobating Isopoda and Diplopoda (including the conservation of *Armadillidium* Brandt, [1831], *Pentheus* Koch, 1841 and *Glomeris* Latreille, 1802). (Case 2909). P.T. Lehtinen & L.B. Holthuis.

(4) *Cubaris murina* Brandt, 1833 (Crustacea, Isopoda): proposed conservation of both the generic and specific names. (Case 2910). P.T. Lehtinen, S, Taiti & F. Ferrara.

(5) *Spherillo* Dana, 1853 (Crustacea, Isopoda): proposed designation of *S. vitiensis* Dana, 1853 as the type species, with designation of a neotype. (Case 2911). P.T. Lehtinen, S. Taiti & F. Ferrara.

(6) *Styloniscus* Dana, 1853 (Crustacea, Isopoda): proposed designation of *S. magellanicus* Dana, 1853 as the type species. (Case 2912). P.T. Lehtinen, S. Taiti, F. Ferrara & A.J.A. Green.

(7) PHILOSCIIDAE Verhoeff, 1916 (Crustacea, Isopoda): proposed precedence over HALOPHILOSCIIDAE Verhoeff, 1908. (Case 2913). P.T. Lehtinen, S. Taiti & F. Ferrara.

(8) *Diplocentrus mexicanus* Peters, 1861 (Arachnida, Scorpiones): proposed confirmation of rediscovered holotype as the name-bearing type. (Case 2914). W.D. Sissom.

(9) *Lironeca* Leach, 1818 (Crustacea, Isopoda): proposed conservation as the correct original spelling. (Case 2915). E.H. Williams, Jr. & T.E. Bowman.

(10) *Matablastothrix* Sugonjaev, 1964 (Insecta, Hymenoptera): proposed designation of *Blastothrix isomorpha* Sugonjaev, 1964 as the type species. (Case 2916). N.D. Voinovich, V.A. Trjapitzin & E.S. Sugonjaev.

(11) *Coproica* Rondani, 1861 and *Ischiolepta* Lioy, 1864 (Insecta, Diptera): proposed conservation of usage by the designation of *Limosina acutangula* Zetterstedt, 1847 as the type species of *Coproica*. (Case 2917). T.A. Wheeler & J.E. Swann.

(12) *Aspidophorus* Dejean, 1821 (Insecta, Coleoptera): proposed conservation as the correct original spelling. (Case 2918). J.V. McHugh.

(13) *Lithobius piceus* L. Koch, 1862 (Chilopoda): proposed conservation of the specific name. (Case 2919). E.H. Eason.

(14) *Diemenia atra* Macleay, 1884 (currently *Demansia atra*; Reptilia, Serpentes): proposed conservation of the specific name. (Case 2920). H.M. Smith & V. Wallach.

(15) *Lachesis bilineatus* var. *oligolepis* Werner, 1901 and *Bothrops albocarinata* Shreve, 1934 (curently *Bothriechis oligolepis oligolepis* and *B. o. albocarinatus*; Reptilia, Serpentes): proposed conservation of the specific and subspecific names. (Case 2921). B. Schätti & H.M. Smith.

(16) *Octopus vulgaris* Cuvier, 1797 (Mollusca, Cephalopoda): proposed conservation of the specific name. (Case 2922). A. Guerra & M.A. Alonso-Zarazaga.

(17) *Loligo vulgaris* Lamarck, 1798 (Mollusca, Cephalopoda): proposed conservation of the specific name. (Case 2923). A. Guerra & M.A. Alonso-Zarazaga.

(18) *Regnum Animale* ... (Brisson, 1762): proposed rejection, with the conservation of the mammalian names *Cuniculus*, *Giraffa*, *Glis*, *Hyaena*, *Hydrochoerus*, *Lutra*, *Meles*, *Philander*, *Pteropus*, *Tapirus*, *Tardigradus* and *Tragulus*. (Case 2928). Anthea Gentry.

(d) *Ruling of the Commission*. Each Opinion, Declaration or Direction published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin*.

The International Commission on Zoological Nomenclature and its publications

The International Commission on Zoological Nomenclature was established in 1895 by the Third International Congress of Zoology, and at present consists of 29 zoologists from 19 countries whose interests cover most of the principal divisions (including palaeontology) of the animal kingdom. The Commission is under the auspices of the International Union of Biological Sciences (IUBS), and members are elected by zoologists attending General Assemblies of IUBS or Congresses of its

associated bodies. Casual vacancies may be filled between Congresses. Nominations for membership may be sent to the Commission Secretariat at any time.

The International Code of Zoological Nomenclature has one fundamental aim, which is to provide 'the maximum universality and continuity in the scientific names of animals compatible with the freedom of scientists to classify all animals according to taxonomic judgements'. The latest (Third) Edition was published in 1985 by the International Trust for Zoological Nomenclature, acting on behalf of the Commission. A Fourth Edition is in the course of preparation and all zoologists are now invited to comment on a draft text (see p. 5 of this part of the *Bulletin*).

Observance of the rules in the *Code* enables a biologist to arrive at the valid name for any animal taxon between and including the ranks of subspecies and superfamily. Its provisions can be waived or modified in their application to a particular case when strict adherence would cause confusion; however, this must never be done by an individual but only by the Commission, acting on behalf of all zoologists. The Commission takes such action in response to proposals submitted to it; applications should follow the instructions to authors published in each part of the *Bulletin*, and assistance will be given by the Secretariat.

The Bulletin of Zoological Nomenclature is published four times each year. It contains applications for Commission action, as described above; their publication is an invitation for any person to contribute comments or counter-suggestions, which may also be published. The Commission makes a ruling (called an Opinion) on a case only after a suitable period for comments. All Opinions are published in the *Bulletin*, which also contains articles and notes relevant to zoological nomenclature; such contributions may be sent to the Secretariat.

The Commission's rulings are summarised in *The Official Lists and Indexes of Names and Works in Zoology*; a single volume covering the period 1895–1985 was published in 1987, and a free supplement covering 1986–1990 was issued in 1991. Copies may be obtained from the Secretariat.

In addition to dealing with applications and other formal matters, the Commission's Secretariat is willing to help with advice on any question which may have nomenclatural (as distinct from purely taxonomic) implications.

The International Trust for Zoological Nomenclature is a charity (non-profit company) registered in the U.K. The Secretariat of the Commission is at present based in London, and the Trust is established there for legal reasons to handle the financial affairs of the Commission. The sale of publications (*Code*, *Bulletin* and *Official Lists and Indexes*) covers less than half of the costs of the service given to zoology by the Commission. Support is given by academies, research councils, associations and societies from a number of countries, and also by individuals, but despite this assistance the level of income remains a severe restraint and donations to the Trust are gratefully received.

A more detailed discussion of the Commission and its activities was published in BZN **48**: 295–299 (December 1991).

Addresses of members of the Commission

Dr F.M. BAYER *U.S. National Museum of Natural History, Washington, D.C. 20560, U.S.A.*
Prof W.J. BOCK *Department of Biological Sciences, Columbia University, New York, NY 10027, U.S.A.*

Dr P. BOUCHET *Muséum National d'Histoire Naturelle, 55 rue de Buffon, 75005 Paris, France*
Dr L.R.M. COCKS *The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.*
Dr H.G. COGGER *Australian Museum, P.O. Box A285, Sydney South, N.S.W. 2000, Australia* (Vice-President)
Prof J.O. CORLISS *P.O. Box 53008, Albuquerque, New Mexico 87153, U.S.A.* (Councillor)
Prof C. DUPUIS *Muséum National d'Histoire Naturelle, 45 rue de Buffon, 75005 Paris, France*
Prof Dr G. HAHN *Institut für Geologie und Paläontologie, Philipps-Universität, D-3550 Marburg, Germany*
Prof Dr O. HALVORSEN *Zoological Museum, Sars GT, 1. N-0562 Oslo 5, Norway*
Mr D. HEPPELL *Department of Natural History, National Museums of Scotland, Chambers Street, Edinburgh EH1 1JF, U.K.*
Prof L.B. HOLTHUIS *Nationaal Natuurhistorisch Museum, Postbus 9517, 2300 RA Leiden, The Netherlands*
Dr Z. KABATA *Canada Department of Fisheries and Oceans, Pacific Biological Station, Nanaimo, B.C., V9R 5K6, Canada*
Prof Dr O. KRAUS *Zoologisches Institut und Zoologisches Museum, Martin-Luther-King-Platz 3, D-20146 Hamburg 13, Germany* (President)
Dr P.T. LEHTINEN *Zoological Museum, Department of Biology, University of Turku, SF-20500 Turku 50, Finland* (Councillor)
Dr E. MACPHERSON *Instituto de Ciencias del Mar, Paseo Nacional, s/n, 08039 Barcelona, Spain*
Dr V. MAHNERT *Muséum d'Histoire naturelle, Case postale 6434, CH-1211 Genève 6, Switzerland*
Prof U.R. MARTINS DE SOUZA *Museu de Zoologia da Universidade de São Paulo, Caixa Postal 7172, 04263 São Paulo, Brazil*
Prof A. MINELLI *Dipartimento di Biologia, Università di Padova, Via Trieste 75, 35121 Padova, Italy*
Dr C. NIELSEN *Zoologisk Museum, Universitetsparken 15, DK-2100 København, Denmark*
Dr I.W.B. NYE *c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.* (Secretary-General)
Prof W.D.L. RIDE *Department of Geology, The Australian National University, P.O. Box 4, Canberra, A.C.T. 2600, Australia*
Dr J. M. SAVAGE *Department of Biology, University of Miami, P.O. Box 249118, Coral Gables, Florida 33124, U.S.A.* (Councillor)
Prof Dr R. SCHUSTER *Institut für Zoologie, Universität Graz, Universitätsplatz 2, A-8010 Graz, Austria*
Dr Y.I. STAROBOGATOV *Zoological Institute, Academy of Sciences, Universitetskaya naberezhnaya 1, St Petersburg 199034, Russia*
Dr P. ŠTYS *Department of Zoology, Charles University, Viničná 7, 128 44 Praha 2, Czech Republic*
Dr F.C. THOMPSON *Systematic Entomology Laboratory, USDA, c/o U.S. National Museum, Washington, D.C. 20560, U.S.A.*
Dr V.A. TRJAPITZIN *Zoological Institute, Academy of Sciences, Universitetskaya naberezhnaya 1, St Petersburg 199034, Russia*
Dr Shun-Ichi UÉNO *Department of Zoology, National Science Museum, Hyakunin-cho 3–23–1 Shinjuku-ku, Tokyo 160, Japan*
Prof A. WILLINK *Universidad Nacional de Tucumán, Instituto Miguel Lillo, Miguel Lillo 205, 4000 Tucumán, Argentina*

International Trust for Zoological Nomenclature

Members

Dr S. Conway Morris, F.R.S. (*Chairman*) (U.K.)
Dr M.K. Howarth (*Secretary and Managing Director*) (U.K.)
Dr H.M.F.P. André (Belgium)
Dr Keiji Baba (Japan)

Prof Per Brinck (Sweden)
Prof D.J. Brothers (South Africa)
Prof J.H. Callomon (U.K.)
Dr N.R. Chalmers (U.K.)
Prof W.T. Chang (China)
Dr H.G. Cogger (Australia)
Dr P.F.S. Cornelius (U.K.)
The Rt. Hon. the Earl of Cranbrook (U.K.)
Dr R.W. Crosskey (U.K.)
Prof J. Forest (France)
Prof L.B. Holthuis (The Netherlands)
Prof Dr O. Kraus (Germany)
Dr A.M. Lister (U.K.)
Dr M. Luc (France)
Dr E. Macpherson (Spain)
Dr J.L. Norenburg (U.S.A.)
Dr I.W.B. Nye (U.K.)
Dr E.P.F. Rose (U.K.)
Dr G.B. White (U.K.)
Prof H.B. Whittington, F.R.S. (U.K.)
Dr A.G. Marshall (*Observer for the Royal Society*) (U.K.)

Fourth Edition of the International Code of Zoological Nomenclature

The Commission proposes to publish a new edition of the Code taking into account the large number of possible amendments submitted, many of them in response to a widely circulated invitation published in the *Bulletin* (BZN **46**: 5). It is planned that the Fourth Edition will be published during 1995 and that on 1 January 1996 its provisions will supersede those in the current (1985) edition.

A discussion draft of the new edition of the Code is now available for comments, and copies will be sent without charge to all subscribers to the *Bulletin* and to members of the American and European Associations for Zoological Nomenclature. Any other institution or individual may order a copy from the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD. The cost of printing and postage is about £3 or US$5. Bank charges on currency exchange make it uneconomic to pay this amount except in sterling or US dollars. The draft of the Code will therefore be sent free of charge, but those able to pay in sterling or US dollars are asked to enclose a cheque for £3 or US$5 to cover the cost.

Before completing the definitive text of the Fourth Edition, the Commission will (in accordance with Article 16 of its Constitution) take into account all comments and suggestions on the draft submitted within one year of its original distribution, but zoologists are asked to send their comments to the Executive Secretary as soon as convenient.

The International Code of Zoological Nomenclature

The Third Edition (published 1985) supersedes all earlier versions and incorporates many changes.

Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., c/o NHB Stop 163, National

Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £19 or $35, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £15 or $29; payment should accompany orders.

Official Lists and Indexes of Names and Works in Zoology — Second Supplement to 1990

The Official Lists and Indexes of Names and Works in Zoology was published in 1987. This book gives details of all the names and works on which the Commission has ruled since it was set up in 1895; there are about 9,900 entries.

Copies can be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., c/o NHB Stop 163, National Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £60 or $110, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £40 or $75; payment should accompany orders.

In the five years 1986–1990, 946 names and five works were added to the Official Lists and Official Indexes. A supplement has been prepared giving these additional entries, together with some amendments and updatings to entries in the 1987 volume. Copies can be obtained without charge from either of the above addresses.

The European Association for Zoological Nomenclature

The European Association for Zoological Nomenclature has been established to facilitate liaison between European zoologists and the Commission, and to support the Commission's work. Members will receive a yearly Newsletter with information on the activities of the Association and Commission, and will be able to buy the *Code* and the *Official Lists and Indexes* at substantial discounts.

The Association's President is Dr V. Mahnert (Switzerland), the Vice-President Dr I.M. Kerzhner (Russia), the Secretary Dr E. Macpherson (Spain) and the Treasurer Dr M.A. Alonso-Zarazaga (Spain). Other members of the Inaugural Council are Dr H.M. André (Belgium), Dr J.-P. Hugot (France), Prof. A. Minelli (Italy) and Dr C. Nielsen (Denmark). Membership of the Association is open to all European zoologists; further details can be obtained from Dr M.A. Alonso-Zarazaga, Museo Nacional de Ciencias Naturales, José Gutiérrez Abascal 2, 28006 Madrid, Spain.

Case 2886

Doris grandiflora Rapp, 1827 (currently *Dendrodoris grandiflora*; Mollusca, Gastropoda): proposed conservation of the specific name

Jesús Ortea & Ángel Valdés

Departamento de Biología de Organismos y Sistemas, Laboratorio de Zoología, Universidad de Oviedo, 33005 Oviedo, Spain

Abstract. The purpose of this application is to conserve the specific name of the Mediterranean nudibranch *Dendrodoris grandiflora* (Rapp, 1827). This species has been widely studied taxonomically and ecologically, and also with regard to some unusual chemical compounds present in it and allied species. The specific name of *Doris guttata* Risso, 1826 is a senior subjective synonym of *grandiflora*, but it has never been used and its suppression is proposed.

---

1. The species *Doris guttata* was reported by Risso (1826, p. 33) as occurring under stones on the Mediterranean coast of France. The species was described as being of transparent grey colour with black spots; no illustration was given and no type material is known. Cantraine (1841, p. 61) remarked of Risso's work '... il est difficile de deviner les espèces que le naturaliste de Nice décrit', but in the light of later knowledge of Mediterranean nudibranchs the identity of *D. guttata* is clear.

2. Rapp (1827, p. 520) described *Doris grandiflora* from the Golfo di Napoli in Italy and gave a coloured illustration (pl. 27, fig. 3).

3. Abraham (1877, p. 211) listed both *D. guttata* and *D. grandiflora*, and in a footnote remarked that both names might be synonyms of *D. limbata* Cuvier, 1804. Ihering (1880, p. 104) regarded *D. grandiflora* as a species distinct from *D. limbata* and this view has been accepted ever since. Ihering gave *D. guttata* Risso, 1826 as a synonym of *D. grandiflora* Rapp, 1827, without commenting on the priority of the former name, and there is little doubt that this synonymy is taxonomically correct.

4. Ihering (1880) placed *Doris grandiflora* in the genus *Doriopsis* Pease, 1860; Pruvot-Fol (1930) transferred it and other species lacking a radula to *Doridopsis* Alder & Hancock, 1863. *Doridopsis* is a junior subjective synonym of *Dendrodoris* Ehrenberg, 1831, and for many years Rapp's species has been placed in *Dendrodoris*.

5. The specific name of *Doris guttata* has not been used as valid since its original proposal in 1826. However *Dendrodoris grandiflora* is in constant use, and we have given the Commission Secretariat a list of 45 works (36 from the last 50 years) to illustrate this; the case for the conservation of *grandiflora* clearly meets the prima facie criteria mentioned in Article 79c of the Code. As examples of works we mention Pruvot-Fol (1954), Nordsieck (1972), Fez (1974), Barletta (1980), Schmekel & Portman (1982), Cervera et al. (1988), Cattaneo-Vietti & Thompson (1989) and Cattaneo-Vietti, Chemello & Giannuzzi-Savelli (1990). The karyotype of *D. grandiflora* has been studied by Rasotto & Cardellini (1983). The unusual chemical products found in it and allied species have been investigated (Karuso, 1987; Cimino, Sodano

& Spinella, 1988; Ávila et al., 1991; Villani, 1991); these include the compounds polygodial and olepupuane which repel predators.

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the specific name *guttata* Risso, 1826, as published in the binomen *Doris guttata*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Specific Names in Zoology the name *grandiflora* Rapp, 1827, as published in the binomen *Doris grandiflora*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *guttata* Risso, 1826, as published in the binomen *Doris guttata* and as suppressed in (1) above.

References

Abraham, P.S. 1877. Revision of the anthobranchiate nudibranchiate mollusca, with descriptions or notices of forty-one hitherto undescribed species. *Proceedings of the Zoological Society of London*, **1877**: 196–269.

Ávila, C., Cimino, G., Crispino, A. & Spinella, A. 1991. Drimane sesquiterpenoids in Mediterranean *Dendrodoris* nudibranchs: anatomical distribution and biological role. *Experientia*, **47**: 306–310.

Barletta, G. 1980. *Guide per il riconoscimento delle specie animali delle acque lagunari e costiere italiane. 3. Gasteropodi nudi.* 124 pp. Consiglio Nazionale delle Ricerche, Genova.

Cantraine, F.J. 1841. Malacologie Méditerranéenne et littorale, ou description des mollusques qui vivent dans la Méditerranée ou sur le continent de l'Italie. *Nouveaux Mémoires de l'Académie Royale des Sciences et Belles-Lettres de Bruxelles*, **13**: 1–173.

Cattaneo-Vietti, R., Chemello, R. & Gianuzzi-Savelli, R. 1990. *Atlas of Mediterranean nudibranchs*. 264 pp. Editrice La Conchiglia, Roma.

Cattaneo-Vietti, R. & Thompson, T.E. 1989. Mediterranean opisthobranch molluscs: a zoogeographic approach. *Bolletino Malacologico*, **25**: 183–204.

Cervera, J.L., Templado, J., García-Gómez, J.C., Ballesteros, M., Ortea, J.A., García, F.J., Ros, J. & Luque, A.A. 1988. Catálogo actualizado y comentado de los Opistobranquios (Mollusca, Gastropoda) de la Península Ibérica, Baleares y Canarias, con algunas referencias a Ceuta y la Isla de Alborán. *Iberus*, (suplemento 1): 1–84.

Cimino, G., Sodano, G. & Spinella, A. 1988. Occurrence of olepupuane in two Mediterranean nudibranchs: a protected form of polygodial. *Journal of Natural Products*, **51**: 1010–1011.

Fez, S. de. 1974. *Ascoglosos y nudibranquios de España y Portugal*. 325 pp. Consejo Superior de Investigaciones Científicas, Valencia.

Ihering, H. von. 1880. Beiträge zur Kenntniss der Nudibranchien des Mittelmeeres. *Malakozoologische Blätter*, (2)**2**: 57–112.

Karuso, P. 1987. Chemical ecology of the nudibranchs. Pp. 31–60 *in* Scheuer, P.J. (Ed.), *Bioorganic marine chemistry*, vol. 1. vii, 185 pp. Springer, Berlin.

Nordsieck, F. 1972. *Die europäischen Meeresschnecken*. 327 pp. Gustav Fisher, Berlin.

Pruvot-Fol, A. 1930. Du genre *Dendrodoris* Ehrenberg et de ses rapports avec le genre *Doriopsis* Pease et avec quelques autres. Notes sur la taxonomie des nudibranches. *Bulletin du Muséum National d'Histoire Naturelle*, **11**: 291–297.

Pruvot-Fol, A. 1954. Mollusques Opisthobranches. *Faune de France*, **58**: 1–460.

Rapp, W. 1827. Über das Molluskengeschlecht *Doris* und Beschreibung einiger neuen Arten desselben. *Nova Acta Physico-Medica Academiae Caesareae Leopoldino-Carolinae Naturae Curiosorum*, **13**: 515–522.

Rasotto, M. & Cardellini, P. 1983. The chromosomes of *Dendrodoris limbata* and *Dendrodoris grandiflora* (Gastropoda, Mollusca). *Caryologia*, **36**: 175–181.

Risso, A. 1826. *Histoire naturelle des principales productions de l'Europe Méridionale et particulièrement de celles des environs de Nice et des Alpes Maritimes*, vol. 4. 439 pp., 12 pls. Levrault, Paris.

Schmekel, L. & Portman, A. 1982. Opisthobranchia des Mittelmeeres. Nudibranchia und Saccoglossa. *Fauna e Flora del Golfo di Napoli*, **40**: 1–410.

Villani, G. 1991. Mediatori chimici nelle comunicazioni inter ed intra-specifiche di molluschi opisthobranchi del Mediterraneo. *Iberus*, **10**: 59–81.

Case 2859

Johnstonia Quatrefages, 1866 (Annelida, Polychaeta): proposed conservation

Andrew S.Y. Mackie
Department of Zoology, National Museum of Wales, Cathays Park, Cardiff CF1 3NP, Wales, U.K.

Judith Gobin
Institute of Marine Affairs, Carenage, Trinidad and Tobago

Abstract. The purpose of this application is to conserve the name *Johnstonia* Quatrefages, 1866 for a genus of marine polychaetes (family MALDANIDAE). Quatrefages had earlier (1849) applied this name in a different taxonomic sense to an indeterminate species in the NEREIDAE. The suppression of the unused senior homonym is proposed, as is the formal rejection of the junior homonyms *Johnstonia* Fuhrmann, 1920 (Cestoda) and *Johnstonia* Basir, 1956 (Nematoda).

---

1. The generic name *Johnstonia* was first published by Quatrefages (1849, p. 304 footnote) for a polychaete annelid of the family NEREIDAE, evidently in honour of George Johnston (1797–1855), an authority on invertebrates. Further reference to this genus was made in a summary (Quatrefages, 1850a, p. 42 footnote) of the publication in which the type species *J. prolifera* was described (Quatrefages, 1850b, p. 350, pl. 8, figs. 1–2). Marschall (1873, p. 434) listed *Johnstonia* Quatrefages, 1849 as a synonym of *Heteronereis* Örsted, 1842; following recognition of the true epitokous nature of the latter genus, Ehlers (1868, p. 450) had earlier synonymised both *Johnstonia* (in the sense of Quatrefages, 1849) and *Heteronereis* with *Nereis*. McIntosh (1910, p. 277) considered *Johnstonia prolifera* an epitoke of *Nereis pelagica* Linnaeus, 1758 or 'other species of *Nereis*'. No type material is present in the Muséum National d'Histoire Naturelle in Paris, or known from elsewhere, and *J. prolifera* must be regarded as a nomen dubium. Apart from the references cited above *Johnstonia* Quatrefages, 1849 has been overlooked or misinterpreted.

2. Jay (1850, p. 95) proposed *Johnstonia* as a generic name for a gastropod mollusc, but this is a nomen nudum since no description, figure or reference was given.

3. Quatrefages later introduced the name, in a different taxonomic sense from that of his previous work, in a generic key to polychaetes of the family MALDANIDAE. It first appeared (Quatrefages, 1865a, p. 597; 1865b, p. 293) in the French spelling 'Johnstonie'. The latinised name *Johnstonia* was made available in January 1866 in an English translation of the second (1865b) publication (Quatrefages, 1866a, p. 21; see also Wright, 1866, p. 720). A detailed description of *Jonhstonia* [sic] was given later that year (Quatrefages, [1866b], p. 244), together with that of the type species *J. clymenoides* (p. 245); although this work is dated 1865 it was not published until

summer 1866 (see Wright, 1867, p. 578 and Claparède, 1870, p. 123). There is no reason to take '*Jonhstonia*' as anything other than a printer's error for *Johnstonia*, and the latter spelling has been used by subsequent authors. It is curious that Quatrefages (1865c, [1866b]) made no mention of his earlier (1849) use of *Johnstonia* for a nereid, though *Heteronereis* was discussed.

4. The name *Johnstonia* has also been introduced for a cestode subgenus (Fuhrmann, 1920, p. 18) and for a genus of nematodes parasitic on insects (Basir, 1956, p. 16). The first has been rejected as a junior synonym (see Fuhrmann, 1924, p. 312), but the nematode name remained in use until the submission of the present application (see Narayan Rao & Jagannath Rao, 1981 and Adamson & van Waerebeke, 1992). The subjective synonym *Oryctophila* van Waerebeke, 1973 (p. 535) has now been adopted (Adamson & van Waerebeke, 1994) as valid in place of *Johnstonia* Basir, 1956.

5. The senior homonym *Johnstonia* Quatrefages, 1849 is an unused name of doubtful meaning in the NEREIDAE (see para. 1 above), but the Commission Secretariat has been given a list of 24 works (seven of them, by eight authors, since 1955) which use *Johnstonia* Quatrefages, 1866 in the MALDANIDAE. These references include Kirkegaard (1959), Day (1967) and Fauchald (1977); for a complete bibliography see our review of the genus (Mackie & Gobin, 1993). There is no confusion as to the identity of Quatrefages's (1866) genus, the characteristic series of vascular cirri on several posterior segments being unique within the MALDANIDAE. Two specimens of *J. clymenoides* from the type locality of San Sebastian in Spain and belonging to the Quatrefages collection are in the Muséum National d'Histoire Naturelle in Paris. This material has been recorded by Grube (1870, p. 320) in his account of the annelids in the Muséum and by ourselves (Mackie & Gobin, 1993), and we (p. 231) designated specimen A'(R)-1868, No. 239b as the lectotype.

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the generic name *Johnstonia* Quatrefages, 1849 for the purposes of both the Principle of Priority and the Principle of Homonymy;

(2) to place on the Official List of Generic Names in Zoology the name *Johnstonia* Quatrefages, 1866 (gender: feminine), type species by monotypy *Jonhstonia* [sic] *clymenoides* Quatrefages, [1866];

(3) to place on the Official List of Specific Names in Zoology the name *clymenoides* Quatrefages, [1866], as published in the binomen *Jonhstonia* [sic] *clymenoides* (specific name of the type species of *Johnstonia* Quatrefages, 1866) and as defined by the lectotype designated by Mackie & Gobin (1993);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:

(a) *Johnstonia* Quatrefages, 1849, as suppressed in (1) above;

(b) *Johnstonia* Fuhrmann, 1920 (a junior homonym of *Johnstonia* Quatrefages, 1866);

(c) *Johnstonia* Basir, 1956 (a junior homonym of *Johnstonia* Quatrefages, 1866).

Acknowledgements

We wish to thank David Heppell (National Museums of Scotland, Edinburgh) and Fredrik Pleijel (Swedish Museum of Natural History, Stockholm) for their useful advice.

References

Adamson, M.L. & van Waerebeke, D. 1992. Revision of the Thelastomatoidea, Oxyurida of invertebrate hosts. I. Thelastomatidae. *Systematic Parasitology*, **21**: 21–63.

Adamson, M.L. & van Waerebeke, D. 1994 (in press). *Johnstonia* Basir (Oxyurida: Nematoda), junior homonym of *Johnstonia* Quatrefages (Polychaeta: Annelida). *Systematic Parasitology*, vol. 29.

Basir, M.A. 1956. Oxyuroid parasites of Arthropoda. A monographic study. 1. Thelastomatidae. 2. Oxyuridae. *Zoologica* (Stuttgart), **106**: 1–79.

Claparède, E. 1870. Les annélides chétopodes du Golfe de Naples, seconde partie. *Mémoires de la Société de Physique et d'Histoire Naturelle de Genève*, **20**: 1–225.

Day, J.H. 1967. *A monograph on the Polychaeta of South Africa.* Part 2. Sedentaria. 420 pp. British Museum (Natural History), London.

Ehlers, E. 1864–1868. *Die Borstenwürmer (Annelida Chaetopoda) nach systematischen und anatomischen Untersuchungen dargestellt*, vol. 1. 748 pp., 24 pls. Engelmann, Leipzig.

Fauchald, K. 1977. The polychaete worms. Definitions and keys to the orders, families and genera. *Natural History Museum of Los Angeles County, Science Series*, **28**: 1–188.

Fuhrmann, O. 1920. Considérations générales sur les *Davainea*. *Festschrift für Zschokke* (Basel), **27**: 1–19.

Fuhrmann, O. 1924. Questions de nomenclature concernant le genre *Rallietina* Fuhrmann (Syn. *Davainea* Bl.). *Annales de Parasitologie Humaine et Comparée*, **2**: 312–313.

Grube, A.E. 1870. Bemerkungen über Anneliden des Pariser Museums. *Archiv für Naturgeschichte*, **36**: 281–352.

Jay, J.C. 1850. *A catalogue of the shells ... in the collection of John C. Jay, M.D.* (Fourth Edition). Craighead, New York.

Kirkegaard, J.B. 1959. The Polychaeta of West Africa. Part I. Sedentary species. *Atlantide Report*, **5**: 7–117.

McIntosh, W.C. 1910. *A monograph of the British annelids*, vol. 2, part 2. Syllidae to Ariciidae. Ray Society, London.

Mackie, A.S.Y. & Gobin, J. 1993. A review of the genus *Johnstonia* Quatrefages, 1866 (Polychaeta, Maldanidae), with a description of a new species from Trinidad, West Indies. *Zoologica Scripta*, **22**: 229–241.

Marschall, A.F. von. 1873. *Nomenclator zoologicus continens nomina systematica generum animalium tam viventium quam fossilium, secundem ordinem alphabeticum disposita.* iv, 482 pp. Salzer, Vindobonae.

Narayan Rao, P. & Jagannath Rao, V. 1981. Description of two new species belonging to the genus *Johnstonia* Basir, 1956 with a key to all the species of the genus. *Proceedings of the Indian Academy of Parasitology*, **2**: 89–95.

Quatrefages, A. de. 1849. Études sur les types inférieurs de l'embranchement des annelés. Mémoire sur la famille des Chlorèmiens, *Chloraemea*, nob. *Annales des Sciences Naturelles (Zoologie)*, (3)**12**: 277–306.

Quatrefages, A. de. 1850a. Mémoire sur le système nerveux des annélides (Extrait). *Annales des Sciences Naturelles (Zoologie)*, (3)**13**: 41–46.

Quatrefages, A. de. 1850b. Études sur les types inférieurs de l'embranchement des annelés. Mémoire sur le système nerveux des annélides proprement dites. *Annales des Sciences Naturelles (Zoologie)*, (3)**14**: 329–398.

Quatrefages, A. de. 1865a. Note sur la classification des annélides. *Compte Rendu Hebdomedaire des Séances de l'Académie des Sciences* (Paris), **60**: 586–600.

Quatrefages, A. de. 1865b. Note sur la classification des annélides, et résponse aux observations de M. Claparède. *Annales des Sciences Naturelles (Zoologie)*, (5)**3**: 253–296.

Quatrefages, A. de. 1865c. *Histoire naturelle des annelés marins et d'eau douce. Annélides et géphyriens.* Tome 1. 588 pp. Roret, Paris.

Quatrefages, A. de. 1866a. On the classification of the annelides. *Annals and Magazine of Natural History*, (3)**17**: 1–24. [Translation of 1865b].

Quatrefages, A. de. [1866b]. *Histoire naturelle des annelés marins et d'eau douce. Annélides et géphyriens.* Tome 2. 794 pp. Roret, Paris.

van Waerebeke, D. 1973. Quatre nouvelles espèces d'Oxyurides associées aux Oryctes à Madagascar. *Bulletin du Muséum National d'Histoire Naturelle*, (3e série, no. 123), Zoologie, **95**: 535–553.

Wright, E.P. 1866. Annelida. *Zoological Record*, **2**: 711–739.

Wright, E.P. 1867. Annelida. *Zoological Record*, **3**: 578–600.

Case 2889

Mastotermes darwiniensis Froggatt, 1897 and *Termes meridionalis* Froggatt, 1898 (currently *Amitermes meridionalis*) (Insecta, Isoptera): proposed retention of neotypes following rediscovery of syntypes

The late J.A.L. Watson

Division of Entomology, CSIRO, G.P.O. Box 1700, Canberra, A.C.T. 2601, Australia

Abstract. The purpose of this application is to retain as the name-bearing types the neotypes designated by Hill (1942) of the Australian termites *Mastotermes darwiniensis* Froggatt, 1897 and *Termes meridionalis* Froggatt, 1898 despite the rediscovery of the syntypes of these species.

---

1. Froggatt (1897, p. 519) described *Mastotermes darwiniensis* from specimens including seven alates which Mr N. Holtze had collected 'flying round the lamp at night' at Palmerston, Port Darwin, N.T., Australia. Froggatt (1898, p. 726) later described *Termes meridionalis* (currently *Amitermes meridionalis*) from specimens (soldiers and workers) which Mr Holtze had collected 'direct from the nests' about 16 km inland from Palmerston. As was his custom, Froggatt did not designate type specimens of either species, instead referring in a general way to the material that he had before him. These two species attracted extensive comment in later publications (cited by Hill, 1942), primarily because of the morphologically primitive features and destructiveness of *Mastotermes darwiniensis* and the 'magnetically' oriented mounds of *Amitermes meridionalis*.

2. In a major revision of termites from the Australian region, Hill (1942) sought to stabilise nomenclature by the designation of type specimens for these two species amongst others.

3. In the case of *Mastotermes darwiniensis*, Hill (1942, p. 21) commented: 'Types appear not to have been selected by Froggatt, or, if selected, they have been lost. From material collected at Port Darwin and determined by Froggatt, 1 [sic] designate a winged adult and a soldier as holoneotype and morphoneotype respectively. These specimens are in the C.S.I.R. Collection'. The neotype female alate is now registered as Type No. 9033 in the Australian National Insect Collection, CSIRO, Canberra (ANIC); it is accompanied by a label 'Mastotermes darwiniensis Frogg Pt Darwin N. Aust', in pencil in Froggatt's hand.

4. In the case of *Termes meridionalis*, Hill (1942, p. 336) commented: 'As Froggatt's specimens are now in poor condition and are not labelled as belonging to his type series, I select the holoneotype soldier and morphoneotype winged adult and worker from a complete nest series taken from a characteristic nest in the type locality on 28th September, 1932. These types are in C.S.I.R. Collection'. The neotype soldier is now registered as Type No. 9077 in ANIC. The Froggatt series to which Hill referred (now ANIC series No. 17713) contains nymphs, soldiers and workers, and bears the labels 'Termes meridionalis Frogga' (end of label missing) and '8. Magnetic

nest termite Pt Darwin', in pencil in Froggatt's hand. There is no label to indicate that the specimens are types, but it was not Froggatt's custom to affix such labels; nor is there any mention of the collector, although Froggatt commonly named the collector on his labels. These specimens of *A. meridionalis* from the Froggatt collection need not therefore be regarded as syntypes, although this possibility cannot be ruled out.

5. During a recent check of termite material held in the Museum of Victoria, Melbourne (NMV), I found a jar containing vials of termites from the Froggatt collection. Among them are what appear to be syntypes of *Mastotermes darwiniensis* and *Termes meridionalis*.

6. The specimen of *Mastotermes darwiniensis* is a female alate, with the pencil labels in Froggatt's hand 'Pt Darwin N. Terr. Holtze 1895 32' and 'Mastotermes darwiniensis Froggatt'. The series of *Termes meridionalis* includes nymphs and workers, labelled 'Magnetic Nest Holtze. Pt Darwin' and 'Termes meridionalis Froggatt', again in pencil in Froggatt's hand. These labels indicate that the specimens are syntypes, even though Froggatt did not mention nymphs among his material of *A. meridionalis*. The jar also contains a label in Hill's hand detailing its contents, indicating that Hill had at one time seen these Froggatt specimens. The label reads: 'Pres. by W W Froggatt Esq. 7.10.98. list written by G F Hill 2.12.25.' and 'Mastot. darwiniensis Frogg. imago co-type.' and 'Hamit. meridionalis workers + nymphs ex type col.'. It is clear that Hill did not have the Froggatt material now in NMV in front of him when he compiled his 1942 monograph during the late 1930s, but he did examine other material from the Museum of Victoria. Thus the vial in NMV containing the type series of *Leucotermes barretti* Hill, 1927 has a label in Hill's hand dated '14.9.38' and there is an annotation dated '9.3.38' on his working copy of his 1927 paper (see Watson & Abbey, 1994). I can only presume that the jar containing Froggatt's type series of *M. darwiniensis* and *T. meridionalis* could not be located and that Hill believed it to be lost.

7. Article 75h of the Code states that 'if, after the designation of a neotype, the . . . syntypes of the nominal species-group taxon are found still to exist, the case is to be referred to the Commission to rule whether the neotype is or is not to be retained as the name-bearing type'. I now consider the situation for each of the species.

8. The syntype and the neotype of *M. darwiniensis* are in good condition, and are of the same caste and sex. The designation of the neotype was published in the major revision of the Australasian termites which is still a viable publication. The designation has thus had a substantial audience and has major taxonomic standing. No purpose would be gained in setting aside Hill's designation and reverting to Froggatt's syntype as the name-bearing type.

9. The status of species in the *Amitermes meridionalis* group is uncertain. However, the discovery of syntypic nymphs and workers of *A. meridionalis* does not contribute to the solution of these problems, since neither nymphs nor workers are suitable as name-bearers. The neotype soldier is essential for any revision of this group. It would therefore be a disservice to taxonomy to set aside Hill's designation of a soldier neotype and revert to one of Froggatt's nymph or worker syntypes as the name-bearing type, all the more so since, as with *Mastotermes darwiniensis*, the designation has had a substantial audience and has major taxonomic standing.

10. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to confirm:
   (a) as the name-bearing type for *Mastotermes darwiniensis* Froggatt, 1897 the neotype designated by Hill (1942) registered as Type No. 9033 in the Australian National Insect Collection;
   (b) as the name-bearing type for *Termes meridionalis* Froggatt, 1898 the neotype designated by Hill (1942) registered as Type No. 9077 in the Australian National Insect Collection;

(2) to place the following names on the Official List of Specific Names in Zoology:
   (a) *darwiniensis* Froggatt, 1897, as published in the binomen *Mastotermes darwiniensis* and as defined by the neotype designated by Hill (1942) and registered as Type No. 9033 in the Australian National Insect Collection;
   (b) *meridionalis* Froggatt, 1898, as published in the binomen *Termes meridionalis* and as defined by the neotype designated by Hill (1942) and registered as Type No. 9077 in the Australian National Insect Collection.

References

Froggatt, W.W. 1897. Australian Termitidae. Part 2. *Proceedings of the Linnean Society of New South Wales*, **21**: 510–552.

Froggatt, W.W. 1898. Australian Termitidae. Part 3. *Proceedings of the Linnean Society of New South Wales*, **22**: 721–758.

Hill, G.F. 1942. *Termites (Isoptera) from the Australian Region*. 479 pp. Council for Scientific and Industrial Research, Melbourne.

Watson, J.A.L. & Abbey, H.M. 1994. *Isoptera*. *In* Houston, W.W.K. (Ed.), Zoological Catalogue of Australia. Australian Government Publishing Service, Canberra. [In preparation].

Case 2713

COLYDIIDAE Erichson, 1842 (Insecta, Coleoptera): proposed precedence over CERYLONIDAE Billberg, 1820 and ORTHOCERINI Blanchard, 1845 (1820); and *Cerylon* Latreille, 1802: proposed conservation of *Lyctus histeroides* Fabricius, 1792 as the type species

Hans Silfverberg

Zoological Museum, P.O. Box 17 (N.Järnvägsgatan 13), FIN-00014, Helsingfors Universitet, Finland

Abstract. The purpose of this application is to conserve the usage of the beetle family-group name COLYDIIDAE Erichson, 1842 by giving it precedence over the senior names CERYLONIDAE Billberg, 1820 and ORTHOCERINI Blanchard, 1845 (1820). Additionally, it is proposed to maintain the nominal genus *Cerylon* Latreille, 1802 in its current usage by designation of *Lyctus histeroides* Fabricius, 1792 as its type species.

---

1. The genus *Colydium* was established by Fabricius (1792, p. 495) with four included species, among them *Bostrichus elongatus* Fabricius, 1787 (p. 36; the generic name was printed *Bostricilus* in error). Latreille (1810, p. 431) designated *B. elongatus* as the type species of *Colydium*. Erichson (1842, p. 213) formed the family COLYDIIDAE (as Colydii); he based this name on *Colydium* which he mentioned earlier in his paper (p. 114) but not on the pages where the family-group name was given. Erichson (1845, p. 251) later discussed the family in more detail and included a number of subordinate family-group names.

2. The genus *Orthocerus* was established by Latreille (1796, p. 16) who gave a description but did not include any species. Later (Latreille, 1807, p. 172) he used this generic name for *Tenebrio hirticornis* De Geer, 1775 (p. 47), which thus became the type species of *Orthocerus* by subsequent monotypy. Blanchard (1845, p. 29) established a new family which he called 'Orthocérites', based on the genus *Orthocerus*. Reitter (1882, p. 116) was the next worker to use *Orthocerus* as the basis for a family-group name, the tribe ORTHOCERINI.

3. Illiger (1798, p. 339) established a new genus *Sarrotrium* with only one nominal species, *Hispa mutica* Linnaeus, 1767 (p. 604); Linnaeus (1767) had introduced that name as an unnecessary replacement for *Dermestes clavicornis* Linnaeus, 1758 (p. 355). Billberg (1820, p. 9) listed *Sarrotrium* in a separate family ('Natio Sarrotriides').

4. When De Geer (1775) described *Tenebrio hirticornis*, the type species of *Orthocerus* (para. 2 above), he gave both *Dermestes clavicornis* and *Hispa mutica* as synonyms. *Sarrotrium* is a junior subjective synonym of *Orthocerus*, and it has not been used this century. Accordingly, the family-group names based on *Sarrotrium* and *Orthocerus* are also subjective synonyms. With one exception ORTHOCERINI has been in universal use since Reitter (1882). Under Article 40b of the Code it should be retained, but given the precedence of the senior synonym, i.e. recorded as ORTHOCERINI Blanchard, 1845 (1820). The exception is Burakowski, Mroczkowski &

Stefan'ska (1986) who resurrected the name SARROTRIINI, having apparently not noticed the effect of Article 40b in either the 1985 or 1964 Codes; Burakowski also used SARROTRIINI in a paper jointly with Slipinski (1986).

5. The genus *Cerylon* was established by Latreille (1802, p. 205), with '*Lyctus terebrans* Fabricius' as the single included species; this species is *Ips terebrans* Olivier, 1790 (no. 18, p. 5). However, Latreille himself (1810, p. 431) later gave *Lyctus histeroides* Fabricius, 1792 (p. 504) as the type species of the genus. This was not an originally included species, but has always been accepted as the type species. Lawrence & Stephan (1975, p. 157) and Dajoz (1976, p. 261) expressly noted *Lyctus histeroides* as the type species of *Cerylon*; other authors have used *Cerylon* in the same sense (e.g. Arnett, 1968; Lucht, 1987; Pope, 1977; the Commission Secretariat holds a list of a further 15 works by 17 authors over the last 35 years illustrating the current usage of *Cerylon*). Billberg (1820, p. 47) included *Cerylon* (based upon *C. histeroides*) in a new family, called 'Natio Cerylonides'.

6. *Ips terebrans* Olivier, the type species of *Cerylon* by monotypy, is currently included in the genus *Pycnomerus* Erichson, 1845 (cf. Burakowski, Mroczkowski & Stefanska, 1986; Lucht, 1987), a genus which is the base for the tribe PYCNOMERINI Erichson, 1845 (p. 290). This tribe has been included in the COLYDIIDAE from the very beginning, and is still considered to belong there (Lawrence, 1980). To change the name *Pycnomerus* to *Cerylon* would merely create confusion.

7. Ever since Erichson (1845) *Orthocerus* has been included in the COLYDIIDAE (subfamily COLYDIINAE), and there have not been any suggestions to remove it (cf. Lawrence, 1980). Erichson (1845, p. 293) also included *Cerylon* in the COLYDIIDAE. Following Crowson (1955) many systematists have considered the CERYLONIDAE to be a separate family (cf. Pal & Lawrence, 1986), but other workers have continued to list CERYLONINAE as a subfamily within the COLYDIIDAE (cf. Lucht, 1987).

8. The name COLYDIIDAE is commonly used, although opinions vary as to its limitation (e.g. Arnett, 1968, p. 839; Dajoz, 1977, p. 37; Pope, 1977, p. 65; the Commission Secretariat holds a list of 10 further references by 11 authors over the last 35 years using COLYDIIDAE). Under the Principle of Priority it should be replaced by ORTHOCERIDAE; if CERYLONIDAE is not considered to denote a separate family it would also replace COLYDIIDAE. To replace COLYDIIDAE by ORTHOCERIDAE or CERYLONIDAE would cause considerable confusion and nomenclatural instability.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers:
   (a) to rule that the family-group name COLYDIIDAE Erichson, 1842 is to be given precedence over the names ORTHOCERIDAE Blanchard, 1845 (1820) and CERYLONIDAE Billberg, 1820 whenever their type genera are placed in the same family-group taxon;
   (b) to set aside all previous fixations of type species for the nominal genus *Cerylon* Latreille, 1802 and to designate *Lyctus histeroides* Fabricius, 1792 as the type species;

(2) to place the following names on the Official List of Generic Names in Zoology:
   (a) *Colydium* Fabricius, 1792 (gender: neuter), type species by subsequent designation by Latreille (1810) *Bostrichus elongatus* Fabricius, 1787;

(b) *Cerylon* Latreille, 1802 (gender: neuter), type species by designation in (1)(b) above *Lyctus histeroides* Fabricius, 1792;

(c) *Orthocerus* Latreille, 1796 (gender: masculine), type species by subsequent monotypy *Tenebrio hirticornis* De Geer, 1775 (a junior subjective synonym of *Dermestes clavicornis* Linnaeus, 1758);

(3) to place the following names on the Official List of Specific Names in Zoology:

(a) *elongatus*, Fabricius, 1787, as published in the binomen '*Bostricilus*' (= *Bostrichus*) *elongatus*, specific name of the type species of *Colydium* Fabricius, 1792;

(b) *histeroides*, Fabricius, 1792, as published in the binomen *Lyctus histeroides*, specific name of the type species of *Cerylon* Latreille, 1802;

(c) *clavicornis*, Linnaeus, 1758, as published in the binomen *Dermestes clavicornis* (senior subjective synonym of *Tenebrio hirticornis* De Geer, 1775, the type species of *Orthocerus* Latreille, 1796);

(4) to place the following names on the Official List of Family-Group Names in Zoology:

(a) COLYDIIDAE Erichson, 1842 (type genus *Colydium* Fabricius, 1792) with the endorsement that it is to be given precedence over CERYLONIDAE Billberg, 1820 and ORTHOCERINI Blanchard, 1845 (1820) whenever their type genera are placed in the same family-group taxon;

(b) CERYLONIDAE Billberg, 1820 (type genus *Cerylon* Latreille, 1802) with the endorsement that it is not to be given priority over COLYDIIDAE Erichson, 1842 whenever their type genera are placed in the same family-group taxon;

(c) ORTHOCERINI Blanchard, 1845 (1820) (type genus *Orthocerus* Latreille, 1796) with the endorsement that it is not to be given priority over COLYDIIDAE Erichson, 1842 whenever their type genera are placed in the same family-group taxon;

(5) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name SARROTRIIDAE Billberg, 1820 (type genus *Sarrotrium* Illiger, 1798) (replaced before 1961 as a name based on a junior generic synonym).

References

Arnett, R.H. 1968. *The beetles of the United States.* 1112 pp. American Entomological Institute, Ann Arbor.

Billberg, G.J. 1820. *Enumeratio Insectorum in Museo Gust. Joh. Billberg.* 138 pp. Gadelianis, Stockholm.

Blanchard, C.E. 1845. *Histoire des insectes, traitant de leurs moeurs et de leurs métamorphoses en général, et comprenant une nouvelle classification fondée sur leurs rapports naturels*, vol. 2. 524 pp., 10 pls. Didot, Paris.

Burakowski, B., Mroczkowski, M. & Stefan'ska, J. 1986. Chrzaszcze, Coleoptera. Cucujoidea. 2. *Katalog Fauny Polski*, **44**: 1–278.

Burakowski, B. & Slipinski, S.A. 1986. Czesc 19, Chrzaszcze — Coleoptera. Gwozdnikowate — Colydiidae, Bothrideridae, Cerylidae, Anommatidae. *Klucze do oznaczania owadow Polski*, (59)**137**: 1–86.

Crowson, R.A. 1955. *The natural classification of the families of Coleoptera.* 187 pp. Lloyd, London.

Dajoz, R. 1976. Les Coléoptères Cerylonidae. Étude des espèces de la faune Paléarctique. *Bulletin du Muséum National d'Histoire Naturelle*, (3, Zoologie)**253**: 249–281.

Dajoz, R. 1977. Coléoptères Colydiidae et Anommatidae Paléarctiques. *Faune de l'Europe et du Bassin Méditerranéen*, **8**: 1–280.

De Geer, C. 1775. *Mémoires pour servir à l'histoire des insectes*, vol. 5. 448 pp. Hosselberg, Stockholm.

Erichson, W.F. 1842. Beitrag zur insecten-fauna von Vandiemensland, mit besonderer Berücksichtigung der geographischen Verbreitung der Insecten. *Archiv für Naturgeschichte*, **8**: 83–287.

Erichson, W.F. 1845. *Naturgeschichte der Insekten Deutschlands. I. Coleoptera*, vol. 3. 968 pp. Berlin.

Fabricius, J.C. 1787. *Mantissa Insectorum*, vol. 1. 348 pp. Proft, Hafniae.

Fabricius, J.C. 1792. *Entomologia Systematica*, vol. 1, part 2. 538 pp. Proft, Hafniae.

Illiger, J.K.W. 1798. *Verzeichniss der Käfer Preussens*. 510 pp. Gebauer, Halle.

Latreille, P.A. 1796. *Précis des caractères génériques des insectes, disposés dans un ordre naturel*. 201 pp. Bordeaux.

Latreille, P.A. 1802. *Histoire naturelle générale et particulière des crustacès et des insectes*, vol. 3. 467 pp. Dufart, Paris.

Latreille, P.A. 1807. *Genera Crustaceorum et Insectorum*, vol. 2. 280 pp. Koenig, Paris.

Latreille, P.A. 1810. *Considérations générales sur l'ordre naturel des animaux composant les classes des crustacés, des arachnides et des insectes*. 444 pp. Schoell, Paris.

Lawrence, J.F. 1980. A new genus of Indo-Australian Gempylodini with notes on the constitution of the Colydiidae (Coleoptera). *Journal of the Australian Entomological Society*, **19**: 293–310.

Lawrence, J.F. & Stephan, K. 1975. The North American Cerylonidae (Coleoptera: Clavicornia). *Psyche*, **82**: 131–166.

Linnaeus, C. 1758. *Systema Naturae*, Ed. 10, vol. 1. 824 pp. Salvii, Holmiae.

Linnaeus, C. 1767. *Systema Naturae*, Ed. 12, vol. 1, part 2. Pp. 533–1327. Salvii, Holmiae.

Lucht, W.H. 1987. *Die Käfer Mitteleuropas. Katalog*. 342 pp. Krefeld.

Olivier, G.A. 1790. *Entomologie, ou histoire naturelle des insectes*, vol. 2. 485 pp. Baudouin, Paris.

Pal, T.K. & Lawrence, J.F. 1986. A new genus and subfamily of mycophagous Bothrideridae (Coleoptera: Cucujoidea) from the Indo-Australian Region, with notes on related families. *Journal of the Australian Entomological Society*, **25**: 185–210.

Pope, R.D. 1977. Kloet & Hincks, A check list of British Insects, (Ed. 2), part 3. Coleoptera and Strepsiptera. *Handbooks for the identification of British insects*, **11**(3): 1–105.

Reitter, E. 1882. Bestimmungs-Tabellen der europäischen Coleopteren. VI. Enthaltend die Familien: Colydiidae, Rhysodidae, Trogositidae. *Verhandlungen des naturforschenden Vereines in Brünn*, **20**: 113–149.

Case 2783

Cryptophagus Herbst, 1792, *Dorcatoma* Herbst, 1792, *Rhizophagus* Herbst, 1793 and *Colon* Herbst, 1797 (Insecta: Coleoptera): proposed conservation as the correct spellings, and proposed conservation of *Lyctus bipustulatus* Fabricius, 1792 as the type species of *Rhizophagus*

Hans Silfverberg

Zoological Museum, P.O. Box 17 (N. Järnvägsgatan 13), FIN-00014, Helsingfors Universitet, Finland

Abstract. The purpose of this application is to conserve the names *Cryptophagus*, *Dorcatoma*, *Rhizophagus* and *Colon* for four beetle genera originally spelt *Kryptophagus*, *Dorkatoma*, *Ryzophagus* and *Kolon*. These were emended to *Cryptophagus* (by Paykull, 1800), *Dorcatoma* (by Fabricius, 1801), *Rhizophagus* (by Illiger, 1801) and *Colon* (by Illiger, 1801) and the emended names are now almost universally used. It is proposed to rule that these unjustified emendations are deemed to be the correct original spellings. It is also proposed that the designation by Westwood ([1838]) of *Lyctus bipustulatus* Fabricius, 1792 as the type species of *Rhizophagus* be deemed as valid.

---

1. In parts 4, 5 and 7 of his *Natursystem aller bekannten in- und ausländischen Insekten*, published between 1792 and 1797, Herbst established a number of genera of which four are considered here. These are *Kryptophagus* (1792), *Dorkatoma* (1792), *Ryzophagus* (1793) and *Kolon* (1797). Within a few years unjustified emendations (technically incorrect spellings, although they were clearly deliberate transliterations) had been made to each of these names. The spelling of these emendations is almost universally used with authorship attributed to Herbst. In addition to the examples given of such usage, the Commission Secretariat holds a list of 18 works by 14 authors over the last 40 years. Each of the four names is considered in turn.

2. *Kryptophagus* was established by Herbst (1792, p. 172) with seven included species. Among them was *Kryptophagus crenatus* (p. 177, pl. 42, fig. 14), for which he gave *Dermestes cellaris* Scopoli, 1763 (p. 16) as a synonym. Paykull (1800, p. 352) spelled the name *Cryptophagus*, and this latter spelling has been used ever since (e.g. Kocher, 1956, p. 59; Hansen, 1964, p. 263; Brakman, 1966, p. 118). Westwood ([1838], p. 13) designated *Dermestes cellaris* Scopoli as the type species of *Cryptophagus*. The family-group name is invariably spelled CRYPTOPHAGIDAE.

3. *Dorkatoma* was established by Herbst (1792, p. 103) with a single species, *Dorkatoma dresdensis* Herbst, 1792 (p. 104, pl. 39, fig. 8), which is the type species by monotypy. Fabricius (1801, p. 330) spelled the name *Dorcatoma* and this latter spelling has been used ever since (e.g. Kocher, 1956, p. 127; Hansen, 1964, p. 300; Brakman, 1966, p. 134). The family-group name is invariably spelled DORCATOMINAE.

4. *Ryzophagus* was established by Herbst (1793, p. 18) with three included new species, among them *R. bipunctatus* (p. 19, pl. 45, fig. 9). Illiger (1801, p. 149) spelled the name *Rhizophagus*. Gyllenhal (1813, p. 420) spelled the genus *Rhyzophagus* and

that spelling was used for a few years. Erichson (1845, p. 226) reverted to Illiger's spelling *Rhizophagus* and this spelling has been used by all subsequent authors with the exception of Říha. In a paper published in 1989 Říha wrote (p. 358): '*Ryzophagus* Herbst, 1793 is a correct original spelling under Article 32b of the Code and should be used. The name *Rhyzophagus* Gyllenhal 1813 is an incorrect subsequent spelling, and *Rhizophagus* Erichson, 1843 is an unjustified emendation and must be regarded as a junior synonym under Article 33b(iii) of the Code. The commonly used name '*Rhizophagus* Herbst, 1793' [sic!] has never been established'. Říha was apparently unaware of Illiger's earlier adoption of *Rhizophagus*. Westwood ([1838], p. 13) designated *Lyctus bipustulatus* Fabricius, 1792 (p. 503) as the type species of *Rhizophagus*. This designation is technically invalid since, although *Ryzophagus bipunctatus* Herbst had long been considered a synonym of *L. bipustulatus*, Westwood did not mention Herbst's name and Herbst had not cited *L. bipustulatus*. Nevertheless stability would be best served by validation of the long accepted type species designation. I am not aware of any designation of an originally included nominal species. The family-group name is spelled RHIZOPHAGIDAE by all authors other than Říha (1989).

5. *Kolon* was established by Herbst (1797, p. 224) with two new included species, one of them being *K. viennensis* Herbst, 1797 (p. 225, pl. 109, fig. 10). Illiger (1801, p. 133) spelled the name *Colon* and this latter spelling has been used ever since (e.g. Kocher, 1958, p. 69; Hansen, 1964, p. 76; Brakman, 1966, p. 32). Thomson (1859, p. 60) designated *Colon viennensis* as type species of the genus. The family-group name is invariably spelled COLONIDAE.

6. As pointed out by Říha (1989) in the case of *Rhizophagus* (see para. 4 above), Herbst's original spellings are the correct ones. However, they have not been used in any subsequent work with the single exception of *Ryzophagus* in Říha's paper. Even when the correctness of Herbst's original spellings has been acknowledged, the emended spelling has been retained (e.g. Pope, 1977). The family-group names CRYPTOPHAGIDAE Kirby, 1837, DORCATOMINAE Thomson, 1859, RHIZOPHAGIDAE Redtenbacher, 1845 and COLONIDAE Horn, 1880 are derived from the currently-used spellings of the four generic names. A change back to Herbst's original spelling of these four generic names would cause considerable confusion, particularly since such names are often listed alphabetically.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to rule that:
  (a) the correct original spellings of the following names are deemed to be as shown:
    (i) *Kryptophagus* Herbst, 1792 to be *Cryptophagus*;
    (ii) *Dorkatoma* Herbst, 1792 to be *Dorcatoma*;
    (iii) *Ryzophagus* Herbst, 1793 to be *Rhizophagus*;
    (iv) *Kolon* Herbst, 1797 to be *Colon*;
  (b) the designation by Westwood ([1838]) of *Lyctus bipustulatus* Fabricius, 1792 as the type species of *Rhizophagus* Herbst, 1793 is deemed to be valid;

(2) to place on the Official List of Generic Names in Zoology the following names:
  (a) *Cryptophagus* Herbst, 1792 (gender: masculine), type species by subsequent designation by Westwood ([1838]) *Dermestes cellaris* Scopoli, 1763;

(b) *Dorcatoma* Herbst, 1792 (gender: neuter), type species by original monotypy *Dorkatoma dresdensis* Herbst, 1792;

(c) *Rhizophagus* Herbst, 1793 (gender: masculine), type species by subsequent designation by Westwood ([1838]) *Lyctus bipustulatus* Fabricius, 1792 as ruled in (1)(b) above;

(d) *Colon* Herbst, 1797 (gender: neuter), type species by subsequent designation by Thomson (1859) *Kolon viennensis* Herbst, 1797;

(3) to place on the Official List of Specific Names in Zoology the following names:

(a) *cellaris* Scopoli, 1763, as published in the binomen *Dermestes cellaris* (specific name of the type species of *Cryptophagus* Herbst, 1792);

(b) *dresdensis* Herbst, 1792, as published in the binomen *Dorkatoma dresdensis* (specific name of the type species of *Dorcatoma* Herbst, 1792);

(c) *bipustulatus* Fabricius, 1792, as published in the binomen *Lyctus bipustulatus* (specific name of the type species of *Rhizophagus* Herbst, 1793);

(d) *viennensis* Herbst, 1797, as published in the binomen *Kolon viennensis* (specific name of the type species of *Colon* Herbst, 1797);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:

(a) *Kryptophagus* Herbst, 1792 (incorrect original spelling of *Cryptophagus* Herbst, 1792);

(b) *Dorkatoma* Herbst, 1792 (incorrect original spelling of *Dorcatoma* Herbst, 1792);

(c) *Ryzophagus* Herbst, 1793 (incorrect original spelling of *Rhizophagus* Herbst, 1793);

(d) *Rhyzophagus* Gyllenhal, 1813 (incorrect subsequent spelling of *Rhizophagus* Herbst, 1793);

(e) *Kolon* Herbst, 1797 (incorrect original spelling of *Colon* Herbst, 1797).

References

Brakman, P.J. 1966. Lijst van Coleoptera uit Nederland en het omliggend gebied. *Monographieen van de Nederlandsche Entomologische Vereeniging*, **2**: 1–219.

Erichson, W.F. 1845. *Naturgeschichte der Insecten Deutschlands. I. Coleoptera*, vol. 3, part 1. 320 pp. Berlin.

Fabricius, J.C. 1792. *Entomologia Systematica emendata et aucta*, vol. 1, part 2. 538 pp. Proft, Hafniae.

Fabricius, J.C. 1801. *Systema eleutheratorum*, vol. 1. 506 pp. Kiliae.

Gyllenhal, L. 1813. *Insecta suecica descripta. Classis I. Coleoptera sive Eleuterata*, vol. 1, part 3. 730 pp. Leverentz, Scaris.

Hansen, V. 1964. Fortegnelse over Danmarks biller (Coleoptera). *Entomologiske Meddelelser*, **33**: 1–507.

Herbst, J.F.W. 1792, 1793, 1797. *Natursystem aller bekannten in- und ausländischen Insekten.* Der Käfer. Part 4, 197 pp. (1792); part 5, 392 pp. (1793); part 7, 346 pp. (1797). Pauli, Berlin.

Illiger, K. 1801. Namen der Insekten-Gattungen, ihr Genitiv, ihr grammatisches Geschlecht, ihr Silbenmass, ihre Herleitung; zugleich mit den deutschen Benennungen. *Magazin für Insektenkunde*, **1**: 125–155.

Kocher, L. 1956. Catalogue commenté des Coléoptères du Maroc. 4. *Travaux de l'Institut Scientifique Chérifien* (Zoologie), **11**: 1–136.

Kocher, L. 1958. Catalogue commenté des Coléoptères du Maroc. 2. *Travaux de l'Institut Scientifique Chérifien* (Zoologie), **14**: 1–244.

Paykull, G. 1800. *Fauna Suecica*. Insecta, vol. 3. 459 pp. Edman, Upsaliae.

Pope, R.D. 1977. Kloet & Hincks, A check list of British insects, Ed. 2, part 3. Coleoptera and Strepsiptera. *Handbooks for the identification of British insects*, **11**(3): 1–105.

Říha, P. 1989. On the validity of the generic name *Ryzophagus* Herbst, 1793. (Coleoptera, Ryzophagidae). *Entomologica Basiliensia*, **13**: 357–359.

Scopoli, J.A. 1763. *Entomologia Carniolica*. 420 pp., 37 pls. Trattner, Vindobonae.

Thomson, C.G. 1859. *Skandinaviens Coleoptera, synoptiskt bearbetade*, vol. 1. 290 pp. Lund.

Westwood, J.O. [1838]. *Synopsis of the genera of British insects*, pp. 1–16. Published with *An introduction to the modern classification of insects ...*, vol. 1, part 1. Pp. 1–48. Longman, Orme, Brown, Green & Longmans, London.

Case 2861

ELMIDAE Curtis, 1830 and *Elmis* Latreille, 1802 (Insecta, Coleoptera): proposed conservation as correct spelling and of feminine gender respectively

M.A. Jäch

Naturhistorisches Museum, Burgring 7, A-1014 Wien, Austria

Abstract. The purpose of this application is to conserve the name ELMIDAE Curtis, 1830 for a large family of waterbeetles of worldwide distribution, based on the genus *Elmis* Latreille, 1802. There have been a number of different family-group names based on this genus.

---

1. Latreille (1802, p. 398) established the generic name *Elmis* with one included species *E. maugetii* Latreille, 1802 (p. 400) which is the type species by monotypy. He did not state the derivation of the generic name or its gender.

2. The correct spelling and the nomenclatural stem of *Elmis* have long been the subject of controversy. In recent times Steyskal (1975, p. 59) argued that the stem was *Elm-* and the gender feminine, the correct family-group name being ELMIDAE. Madge & Pope (1980) reviewed the history of the name *Elmis* and concluded (p. 257) that *Elmis* 'must be regarded as a modern Latin word, *Elmis*, *Elmidis*, m., coined by Latreille, but derived from ancient Greek'. The correct spelling of the family-group name would therefore be ELMIDIDAE.

3. The first available family-group name based on *Elmis* Latreille is ELMIDAE Curtis, 1830 (pl. 294). Madge & Pope (1980) argued that ELMIDAE was an incorrect original spelling which, under the Code (Article 32d of the 1985 Edition), had to be corrected to ELMIDIDAE with the date and authorship of the original spelling. I am aware of only two papers since 1980 in which the authors have followed Madge & Pope (1980) in adopting the spelling ELMIDIDAE; these are Nilsson & Bondestad (1987) and Engblom, Lingdell & Nilsson (1990). On the other hand a large number of authors have since 1980 used the spelling ELMIDAE (e.g. Brown, 1981; Jäch, 1984; Satô, 1985; Spangler & Santiago-Fragoso, 1992; Kodada, 1993; a list of a further 30 papers by 21 different authors is held by the Commission Secretariat). Furthermore, to the best of my knowledge, no author has accepted the change of gender of *Elmis* to the masculine as proposed by Madge & Pope (1980).

4. Madge & Pope (1980) pointed out that, in addition to ELMIDAE and ELMIDIDAE there were a number of different family-group names which had been applied to the Riffle beetles, including:

LIMNIIDAE Stephens, 1828 — unavailable under Article 11f of the Code since, at the time of its proposal, Stephens regarded the name on which it was based (*Limnius* Illiger, 1802) as a junior synonym of *Elmis* Latreille. Thomson (1859, p. 21) made the name LIMNIIDAE available, including *Limnius* and *Elmis* as separate genera. Wiezlak (1986) used the name LIMNIIDAE but it is not otherwise in current use.

ELMINTHIDAE Steffan, 1958 — based on *Elmis*, with the stem as *Elminth-*. Olmi (1981) used the name ELMINTHIDAE but it is not otherwise in current use.

HELMIDAE Grouvelle, 1900 — based on an unjustified emendation by Bedel (1878) of *Elmis* to *Helmis*. HELMIDAE is not in current use.

HELMINTHIDAE Ganglbauer, 1904 — based on *Helmis*, with the stem as *Helminth-*. HELMINTHIDAE is not in current use.

Madge & Pope (1980) pointed out that the names ELMINTHIDAE, HELMIDAE and HELMINTHIDAE were junior objective synonyms of the family-group name based on *Elmis*, which they considered to be ELMIDIDAE. Under Article 35d of the Code all versions of a family-group name other than the correct one are incorrect spellings. It follows that ELMINTHIDAE, HELMIDAE and HELMINTHIDAE are not available names.

5. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to rule that:
  (a) the gender of the generic name *Elmis* Latreille, 1802 is feminine;
  (b) for the purposes of Article 29 the stem of the generic name *Elmis* Latreille, 1802 is ELM-;
(2) to place on the Official List of Generic Names in Zoology the name *Elmis* Latreille, 1802 (gender: feminine), type species by monotypy *Elmis maugetii* Latreille, 1802;
(3) to place on the Official List of Specific Names in Zoology the name *maugetii* Latreille, 1802, as published in the binomen *Elmis maugetii* (specific name of the type species of *Elmis* Latreille, 1802);
(4) to place on the Official List of Family-Group Names in Zoology the name ELMIDAE Curtis, 1830, type genus *Elmis* Latreille, 1802 (spelling as ruled in (1)(b) above).

References

Bedel, L. 1878. Diverses observations relatives à l'insecte décrit par Latreille sous le nom d'*Elmis Maugetii* (Hist. nat. des Fourmis, 1802 p. 398 et 400). *Annales de la Société Entomologique de France*, (5)**8**: lxxiv–lxxv.

Brown, H.P. 1981. A distributional survey of the world genera of aquatic dryopid beetles (Coleoptera: Dryopidae, Elmidae, and Psephenidae sens. lat.). *Pan-Pacific Entomologist*, **57**(1): 133–148.

Curtis, J. 1830. *British entomology*, vol. 7. Unnumbered pages, pls. 290–337. Author, London.

Engblom, E., Lingdell, P.-E. & Nilsson, A.N. 1990. The Swedish Elmididae (Coleoptera) — identification, distribution, habitat preferences, and environmental indication. *Entomologisk Tidskrift*, **111**: 105–121. [In Swedish, English abstract].

Ganglbauer, L. 1904. *Die Käfer von Mitteleuropa*, vol. 4. 286 pp. Karl Gerold's son, Wien.

Grouvelle, A. 1900. Contribution à l'étude de la faune entomologique de Sumatra (Côte ouest: Indrapoera — Vice-résidence de Païnan) (Voyage de M.J.-L. Weyers). XIIe Article. Nitidules, Colydiides, Rhysodides, Cucujides, Monotomides, Cryptophagides, Tritomides, Dryopides. *Annales de la Société Entomologique de Belgique*, **44**: 262–268.

Jäch, M.A. 1984. Die Koleopterenfauna der Bergbäche von Südwest-Ceylon. *Archiv für Hydrobiologie*, supplement, **69**(2): 228–332.

Kodada, J. 1993. *Jaechomorphus*, a new riffle beetle genus from Sumatra (Coleoptera: Elmidae: Larainae). *Entomological Problems*, **24**(2): 1–17.

Latreille, P.A. 1802. *Histoire naturelle des fourmis*. 445 pp., 12 pls. Barrois, Paris.

Madge, R.B. & Pope, R.D. 1980. The valid family-group name based on *Elmis* Latreille (Coleoptera: Dryopoidea). *Entomologist's Gazette*, **31**: 255–259.

Nilsson, A.N. & Bondestad, L. 1987. Some interesting records of aquatic insects from the Råneälven river in northern Sweden. *Entomologisk Tidskrift*, **108**: 118–119. [In Swedish, English summary].

Olmi, M. 1981. Results of the Czechoslovak-Iranian entomological expeditions to Iran. *Acta Entomologica Musei Nationalis Pragae*, **40**: 337–339.

Satô, M. 1985. *Elmidae*. Pp. 434–440 *in* Uéno, S.-I., Kurosawa, Y. & Satô, M. (Eds.), *The Coleoptera of Japan in Colour*. Hoikusha Publishing, Osaka.

Spangler, P.J. & Santiago-Fragoso, S. 1992. The aquatic beetle subfamily Larainae (Coleoptera: Elmidae) in Mexico, Central America, and the West Indies. *Smithsonian Contributions to Zoology*, **528**: 1–74.

Steffan, A.W. 1958. Die deutschen Arten der Gattungen *Elmis*, *Esolus*, *Oulimnius*, *Riolus*, *Aptyktophallus* (Coleoptera: Dryopoidea). *Beiträge zur Entomologie*, **8**: 122–178.

Stephens, J.F. 1828. *Illustrations of British Entomology*, Mandibulata, vol. 2 (part). 112 pp. Author, London.

Steyskal, G.C. 1975. The family-group names based on the name of the genus *Elmis* Latreille (Coleoptera). *Proceedings of the Entomological Society of Washington*, **77**: 59–60.

Thomson, C.G. 1859. *Skandinaviens Coleoptera*, 1. 290 pp. Lund.

Wiezlak, W. 1986. *Coleoptera, 48–49: Parnidae, Limniidae, Psephenidae. Klucze do oznaczania owadow Polski*. 67 pp. Polskie Towarzystwo Entomologiczne, Warszawa & Wroclaw.

Case 2858

Hydrophoria Robineau-Desvoidy, 1830 (Insecta, Diptera): proposed designation of *Musca lancifer* Harris, [1780] as the type species

Graham C.D. Griffiths

Department of Entomology, University of Alberta, Edmonton, Alberta T6G 2E3, Canada

Abstract. The purpose of this application is to designate *Musca lancifer* Harris, [1780] (a senior subjective synonym of *Anthomyia conica* Wiedemann, 1817) as the type species of *Hydrophoria* Robineau-Desvoidy, 1830. This will conserve the universal usage of *Hydrophoria* for a genus in the ANTHOMYIIDAE; Coquillett (1910) cited a type species which would make the name applicable to a genus of MUSCIDAE.

---

1. The genus *Hydrophoria* was described by Robineau-Desvoidy (1830, p. 503) with nine nominal species, all new. The descriptions of at least two of the species (*H. tibialis* and *H. sagittariae*, p. 505) are compatible with the common European anthomyiid described by Harris ([1780], p. 126, pl. 36) as *Musca lancifer* and by Wiedemann (1817, p. 79) as *Anthomyia conica* 'Meig.'. *Hydrophoria* has been long and universally used for a genus in the ANTHOMYIIDAE, but its type species has not been validly fixed in this sense.

2. Macquart (1835, p. 297) discussed *Hydrophoria*, giving '*Hydrophoria conica* — *H. tibialis* ? Rob.D.' as the first species. Unfortunately Macquart's action does not constitute a type designation, but *Hydrophoria* has been used ever since in the sense which could be typified by *Anthomyia conica* Wiedemann, 1817 (see para. 4 below).

3. Westwood ([1840], p. 142) designated *Musca nigrita* Fallén, 1823 (p. 60) as the type, but this was not an originally included nominal species (by 1830 Robineau-Desvoidy had been unable to obtain a copy of Fallén's work: see p. 18 of his *Essai*). Coquillett (1910, p. 554) noted Westwood's selection of *M. nigrita*, stating this to be synonymous with *M. vespertina* Fallén, 1823 (p. 58) and Robineau-Desvoidy's *H. littoralis* (an originally included species) as follows: '*Hydrophoria* ... Type, *Musca vespertina* Fallen (as *littoralis*, new species), the last species, by designation of Westwood ... (as *nigrita* Fallen). Syn., *Hebecnema* Schnabl, 1889'. This synonymy did not derive from Westwood, who had not mentioned *Hydrophoria littoralis* at all but had merely recorded Robineau-Desvoidy's use (p. 503) of the Latin term 'Aricinae littorales' for a group of genera including *Hydrophoria*. Macquart (1835, p. 301) however had earlier synonymized *H. littoralis* with *M. nigrita* (but not with *M. vespertina*).

4. Rondani (1866, p. 72) gave *Anthomyia conica* as the type species in accordance with the usage of *Hydrophoria* which had already become established. This is invalid because *A. conica* was not an originally included nominal species, but nevertheless it has been cited as the type by later authors (e.g. Kloet & Hincks, 1945, p. 423) and has been included in *Hydrophoria* by all authors during the present century.

5. Coquillett's action (para. 3 above) has been accepted as a valid (although inadvertent) designation of an originally included nominal species (i.e. *H. littoralis*), but this would have the highly unsatisfactory consequence of transferring the name *Hydrophoria* to a genus in the MUSCIDAE. No author has been willing to make this transfer. Huckett (1965, p. 863) well summarized the situation as follows: '*Hydrophoria* Robineau-Desvoidy, 1830: 503. Type-species, *littoralis* Robineau-Desvoidy (Coquillett, 1910b: 554). The identity of *littoralis* is in doubt, as is the identity of an earlier-suggested senior synonym, *nigrita* Fallén, which has been variously referred to such widely different genera as *Hebecnema* and *Musca*. Common usage of *Hydrophoria* has followed the interpretation of Rondani, 1866a: 72 (1866: 5) who designated as type species *Anthomyia conica* Wiedemann, a species not originally included. The author prefers to maintain this established usage of *Hydrophoria*, either by arbitrarily considering *littoralis* as a true *Hydrophoria*, or if necessary by appplying to the I.C.Z.N. to fix the type species as *conica* Wiedemann'.

6. Hennig (1969, p. 251) followed Huckett's suggestion by arbitrarily 'synonymizing' *H. littoralis* Robineau-Desvoidy (p. 506) with *A. conica*, a strategem to allow *conica* to be taken as the valid name of the type species of *Hydrophoria*. This is unacceptable, however, because specialists on the MUSCIDAE continue to assume (on the basis of the original description) that *Hydrophoria littoralis* was a species of *Hebecnema* Schnabl, 1889. In Pont's (1986) catalogue of Palaearctic MUSCIDAE the name *littoralis* is listed (p. 160) as a synonym of *Hebecnema nigra* (Robineau-Desvoidy, 1830, p. 501).

7. Evenhuis & Thompson (1990, p. 245) listed a previously overlooked designation of *Anthomyia conica* as the type species of *Hydrophoria* by Duponchel (1845, p. 760), in the form '*H. conica* (*Minca* id. Fallen, *H. tibialis* ? R.-D.'; *Minca* is evidently an error for *Musca*. However, the validity of this designation is unfortunately negated by the question mark. Duponchel was doubtless following Macquart (see para. 2 above) in regarding *A. conica* as characteristic of *Hydrophoria* but in being unsure that Robineau-Desvoidy (p. 505) had applied his name *tibialis* to this species. Although formally invalid, Duponchel's designation confirms the early establishment of the tradition of regarding *A. conica* as the 'typical' species of *Hydrophoria*.

8. This application is made in order to preserve the concept of *Hydrophoria*, established since the time of Macquart (1835), Duponchel (1845) and Rondani (1866), as typified by *Anthomyia conica* Wiedemann, 1817. Pont & Michelsen (1982, p. 34) consider *A. conica* to be a junior subjective synonym of *Musca lancifer* Harris, [1780], and the combination *Hydrophoria lancifer* has been in use by anthomyiid specialists during the past decade (e.g. Fan et al., 1988, p. 113). I therefore propose that *M. lancifer* be designated as the type species of *Hydrophoria*.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type species for the nominal genus *Hydrophoria* Robineau-Desvoidy, 1830, and to designate *Musca lancifer* Harris, [1780] as the type species;

(2) to place on the Official List of Generic Names in Zoology the name *Hydrophoria* Robineau-Desvoidy, 1830 (gender: feminine), type species by designation in (1) above *Musca lancifer* Harris, [1780];

(3) to place on the Official List of Specific Names in Zoology the name *lancifer* Harris, [1780], as published in the binomen *Musca lancifer* (specific name of the type species of *Hydrophoria* Robineau-Desvoidy, 1830).

References

Coquillett, D.W. 1910. The type-species of the North American genera of Diptera. *Proceedings of the United States National Museum*, **37**: 499–647.

Duponchel, P.A.J. 1845. *Hydrophoria*. P. 760 *in* d'Orbigny, C.V.D. (Ed.), *Dictionnaire Universel d'Histoire Naturelle*, vol. 6. 792 pp. Renard, Paris.

Evenhuis, N.L. & Thompson, F.C. 1990. Type designations of genus-group names of Diptera given in d'Orbigny's *Dictionnaire Universel d'Histoire Naturelle*. *Bishop Museum Occasional Papers*, **30**: 226–258.

Fallén, C.F. 1820–1823. Monographia Muscidum Sveciae. 94 pp. *in: Diptera Sveciae*, vol. 1. Berlingianis, Lundae.

Fan, Z.-D. et al. 1988. *Economic insect fauna of China*. Fasc. 37. Diptera: Anthomyiidae. xiv, 396 pp., 10 pls. Science Press, Beijing.

Harris, M. 1776–[1780]. *An exposition of English insects*. 166 pp. Author, London.

Hennig, W. 1969. Gattung *Hydrophoria* Robineau-Desvoidy. Pp. 251–288 *in* Lindner, E. (Ed.), *Die Fliegen der paläarktischen Region*, vol. 7 (Lieferung 278). Schweizerbart, Stuttgart.

Huckett, H.C. 1965. Subfamily Anthomyiinae. Pp. 842–869 *in* Stone, A. et al. (Eds.), *A catalog of the Diptera of America north of Mexico*. United States Department of Agriculture, Handbook no. 276. 1696 pp.

Kloet, G.S. & Hincks, W.D. 1945. *A check list of British insects*. 483 pp. Authors, Stockport.

Macquart, P.J.M. 1835. *Histoire naturelle des insectes*. Diptères, vol. 2. 703 pp. Roret, Paris.

Pont, A.C. 1986. Muscidae. Pp. 57–215 *in* Soós, A. & Papp, L. (Eds.), *Catalogue of Palaearctic Diptera*, vol. 11. 346 pp. Akadémiai Kiadó, Budapest.

Pont, A.C. & Michelsen, V. 1982. The Muscoidea described by Moses Harris (Diptera: Fanniidae, Scathophagidae, Anthomyiidae, Muscidae). *Steenstrupia*, **8**: 25–46.

Robineau-Desvoidy, J.-B. 1830. Essai sur les Myodaires. *Mémoires présentés par divers savants à l'Académie Royale des Sciences de l'Institut de France*, (2)**2**: 1–813.

Rondani, C. 1866. Anthomyinae Italicae collectae distinctae et in ordinem dispositae. *Atti della Società Italiana di Scienze Naturali*, **9**: 68–217.

Westwood, J.O. [1840]. *Synopsis of the genera of British insects*, pp. 97–154. Published with *An introduction to the modern classification of insects . . .*, vol. 2, part 16 (pp. 401–587). Longman, Orme, Brown, Green & Longman, London.

Wiedemann, C.R.W. 1817. Neue Zweiflügler (Diptera Linn.) aus der Gegend um Kiel, beschrieben vom Herausgeber. *Zoologisches Magazin*, **1**: 61–86.

Case 2881

Sicus Scopoli, 1763 and *Myopa* Fabricius, 1775 (Insecta, Diptera): proposed conservation by the designation of *Conops buccata* Linnaeus, 1758 as the type species of *Myopa*

Sidney Camras

c/o Division of Insects, Field Museum of Natural History, Roosevelt Road at Lake Shore Drive, Chicago, Illinois 60605–2496, U.S.A.

Abstract. The purpose of this application is to conserve the universal understanding and usage of the names *Sicus* Scopoli, 1763 and *Myopa* Fabricius, 1775 (family CONOPIDAE Macquart, 1834) by the designation of *Conops buccata* Linnaeus, 1758 as the type species of *Myopa*. At present *Conops ferruginea* Linnaeus, 1758 is the valid type species of both genera. Species of *Sicus* are Palaearctic and Oriental (north India) in distribution; species placed in *Myopa* occur world-wide, except for the Afrotropical and Oceanic regions. The larvae of conopid species are solitary and internal parasites, mainly of adult bees and wasps. The adults are common on flowers.

---

1. Scopoli (1763, p. 369) established the genus *Sicus* for two nominal species, *Sicus buccatus* and *S. ferrugineus*. He referred to *Conops buccata* Linnaeus, 1758 (p. 605; recte *buccatus* under Article 30a(ii) of the Code) in his citation of the first species. He did not give a citation for the second species but this has been identified with *C. ferruginea* Linnaeus, 1761 (p. 468; recte *ferrugineus*) by subsequent authors. Coquillet (1910, p. 605) designated *C. ferruginea* Linnaeus as the type species of *Sicus* and this has been accepted by subsequent authors (see, for example, Chvála & Smith, 1988, p. 269).

2. Fabricius (1775, p. 798) established the generic name *Myopa* and included *Sicus* in its synonymy. Among the four included nominal species were *buccata* and *ferruginea* and synonymies for these species referred to the names as used by Linnaeus (1761) and Scopoli (1763). Curtis (1838, pl. 677, text) designated *Conops buccata* Linnaeus as the type species of the genus; with the exception of Robineau-Desvoidy (1853; see para. 5 below), this has been accepted by all subsequent authors (see, for example, Coquillet, 1910, p. 573) and the genus has been used with this concept. However, in an earlier designation, Latreille (1810, p. 444) selected '*Myopa ferruginea* F.' (i.e. Fabricius = *Conops ferruginea* Linnaeus, 1761) as the type. This designation has been consistently overlooked. Its recognition would render *Myopa* a junior objective synonym of *Sicus* Scopoli; *Sicus* would become the valid name for the group of species currently included in *Myopa* and a new name would be required for *Sicus* as currently understood. For more than 130 years the names *Sicus* and *Myopa* have been used to refer to two separate genera; before then both groups of species were combined under the name *Myopa* despite this being the junior synonym. In 1861 Schiner (p. 138) used *Sicus* for the single species *ferruginea* and retained *Myopa* for the *buccata* group of species. For the name *Sicus* now to be transferred from one genus to the other would cause confusion in the nomenclature of bothgenera. *Myopa* is the type genus of the subfamily MYOPINAE Macquart, 1834 (p. 333; published as 'Myopariae').

3. Collin (1959, pp. 145–146) set out the problem with Latreille's (1810) type species designation for *Myopa* and noted that 'if ... Curtis' type designation be accepted, the two generic names [*Sicus* and *Myopa*] can still be retained in the sense in which they have for so long been used ... This proposition meets the expressed desires of the Zoological Commission that all confusing changes in the use of well-known generic names should always be avoided'. The problem was also recorded in BZN **18**: 43 (December 1960), when it was noted: 'The plenary powers may be needed to conserve the usage of *Myopa* and *Sicus*'. Under the entry for *Myopa* in the *Catalog of the Diptera of America north of Mexico*, I (Camras, 1965, p. 630) cited *M. buccata* as the type species but noted that there was a problem: 'Long-standing usage is maintained here, and the case has been submitted to the International Commission on Zoological Nomenclature'. Despite these statements an application to the Commission has not been made until now.

4. Some eight nominal species are currently placed in the genus *Sicus* and 43 are placed in *Myopa*. Both names are included in the North American and Palaearctic dipteran catalogues, which are already cited in this application (chapters by Camras, 1965 and Chvála & Smith, 1988 respectively). Both names are also included in the catalogues of South American (Papavero, 1971) and Nearctic (Smith & Peterson, 1987) Diptera. Several further recent works in which the names are used (Chvála, 1963, 1965; Smith, 1959, 1969, 1970; and Zimina, 1963, 1974, 1975, 1976) are cited in the bibliography of vol. 8 of the Palaearctic catalogue.

5. Collin (1959, p. 145) recorded the unnamed species in the illustration (pl. 120, figs. 1–3) on which the name *Stomoxoides* Schaeffer, 1766 (ref. 1766a) was based as a specimen of *Conops ferruginea* Linnaeus, 1761. The generic name was used subsequently only by Schaeffer ([1766b], [1779]), when further unnamed taxa were included. Panzer ([1794], pl. 24) identified Schaeffer's illustration ([1779], pl. 261, fig. 3) of *Stomoxoides* 'quintus' as *Myopa ferruginea*; further taxa were identified as species of *Myopa* by Panzer (1804). Following Panzer's ([1794]) action, under the Code the name *Stomoxoides* is an objective synonym of both *Sicus* and *Myopa* (junior to *Sicus* but senior to *Myopa*). Approval by the Commission of the designation of *C. buccata* as the type of *Myopa* will allow *Stomoxoides* to be placed on the Official Index as a junior objective synonym of *Sicus*. Collin (1959, p. 146) also noted that in a revision of the MYOPINAE, Robineau-Desvoidy (1853, p. 113) accepted Latreille's (1810) designation of *C. ferruginea* as the type (and only species) of *Myopa* and (p. 93) designated *M. picta* Panzer, 1798 (pl. 22) as the type of *Sicus*; since *picta* was not originally included in the genus this designation is invalid. Robineau-Desvoidy (p. 98) proposed the new name *Myopella* for *M. buccata* (Linnaeus), and included a further nine nominal species in the genus. Approval by the Commission of this application will render *Myopella* a junior objective synonym of *Myopa* Fabricius, 1775.

6. The name *Coenomyia* Latreille, 1796 (p. 159) was proposed for a genus without included species. Subsequently, Latreille (1802, p. 439) included the single species *Sicus ferruginea* 'F.' (i.e. Fabricius), thereby rendering *Coenomyia* a junior objective synonym of both *Sicus* and *Myopa*. Lioy (1864, p. 1327) proposed the name *Cylindrogaster* for the single species *Conops ferruginea* Linnaeus and thus this name also is a junior objective synonym of *Sicus* and *Myopa*. Following approval by the Commission of this application the names *Coenomyia* and *Cylindrogaster* will be

placed on the Official Index as junior objective synonyms of *Sicus* Scopoli, 1763. The existence of two junior homonyms of *Sicus* Scopoli has previously been noted (BZN **18**: 43). The type species of *Sicus* Latreille, 1796 (p. 158) by subsequent monotypy of Latreille (1805, p. 312) is *Musca cimecoides* Fabricius, 1779 (p. 253) and the generic name is an invalid senior objective synonym of *Tachydromia* Meigen, 1803 (p. 269; see BZN **18**: 35–36). The name *Tachydromia* (family EMPIDIDAE) is currently in use (see, for example, Melander, 1965, p. 474). No type designation is known for *Sicus* Fabricius, 1798 (pp. 547, 554); '*ferruginea*' was one of the included species but this was cited without an author and from the listed synonymies the name may well not refer to Linnaeus's taxon (see Collin, 1959, p. 145). It is proposed that the names *Sicus* Latreille, 1796 and *Sicus* Fabricius, 1798 be placed on the Official Index.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all fixations of type species for the nominal genus *Myopa* Fabricius, 1775 prior to the designation by Curtis (1838) of *Conops buccata* Linnaeus, 1758;

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Sicus* Scopoli, 1763 (gender: masculine), type species by subsequent designation by Coquillet (1910) *Conops ferruginea* Linnaeus, 1761;
   (b) *Myopa* Fabricius, 1775 (gender: feminine), type species by subsequent designation by Curtis (1838) *Conops buccata* Linnaeus, 1758, as ruled in (1) above;

(3) to place on the Official List of Specific Names in Zoology the following names:
   (a) *ferruginea* Linnaeus, 1761, as published in the binomen *Conops ferruginea* (specific name of the type species of *Sicus* Scopoli, 1763);
   (b) *buccata* Linnaeus, 1758, as published in the binomen *Conops buccata* (specific name of the type species of *Myopa* Fabricius, 1775);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
   (a) *Stomoxoides* Schaeffer, 1766 (a junior objective synonym of *Sicus* Scopoli, 1763);
   (b) *Coenomyia* Latreille, 1796 (a junior objective synonym of *Sicus* Scopoli, 1763);
   (c) *Cylindrogaster* Lioy, 1864 (a junior objective synonym of *Sicus* Scopoli, 1763);
   (d) *Myopella* Robineau-Desvoidy, 1853 (a junior objective synonym of *Myopa* Fabricius, 1775);
   (e) *Sicus* Latreille, 1796 (a junior homonym of *Sicus* Scopoli, 1763);
   (f) *Sicus* Fabricius, 1798 (a junior homonym of *Sicus* Scopoli, 1763).

References

Camras, S. 1965. Family Conopidae. Pp. 625–632 *in* Stone, A., Sabrosky, C.W., Wirth, W.W., Foote, R.H. & Coulson, J.R. (Eds.), *A catalog of the Diptera of America north of Mexico*. Agricultural Handbook No. 276. iv, 1696 pp. United States Department of Agriculture, Washington.

Chvála, M. & Smith, K.G.V. 1988. Family Conopidae. Pp. 245–272 *in* Soós, A. & Papp, L. (Eds.), *Catalogue of Palaearctic Diptera*, vol. 8. 363 pp. Elsevier, Amsterdam.

Collin, J.E. 1959. The British species of *Myopa* (Dipt., Conopidae). *The Entomologist's Monthly Magazine*, **95**: 145–151.

Coquillett, D.W. 1910. The type-species of the North American genera of Diptera. *Proceedings of the United States National Museum*, **37**: 499–647.

Curtis, J. 1838. *British Entomology; being illustrations and descriptions of the genera of insects found in Great Britain and Ireland ...*, vol. 15. Pls. 674–721 (text). Author, London.

Fabricius, J.C. 1775. *Systema entomologiae, sistens insectorum classes, ordines, genera, species adiectis synonymis, locis, descriptionibus, observationibus.* [xxxii], 832 pp. Flensburgi et Lipsiae.

Fabricius, J.C. 1779. *Reise nach Norwegen mit Bemerkungen aus der Naturhistorie und Oekonomie.* lxiv, 388, [12] pp. Hamburg.

Fabricius, J.C. 1798. *Supplementum Entomologiae Systematicae.* 572 pp. Hafniae.

Latreille, P.A. 1796. *Précis des caractères génériques des insectes, disposés dans un ordre naturel.* xvi, 208 pp. Paris.

Latreille, P.A. [1802], [1805]. *Histoire naturelle, générale et particulière des crustacés et des insectes*, vol. 3. 467 pp. ([1802]); vol. 14. 432 pp. ([1805]). Dufart, Paris.

Latreille, P.A. 1809. *Genera crustaceorum et insectorum ...*, vol. 4. 399 pp. Paris.

Latreille, P.A. 1810. *Considerations générales sur l'ordre naturel des animaux composant les classes des crustacés, des arachnides, et des insectes.* 444 pp. Schoell, Paris.

Linnaeus, C. 1758. *Systema Naturae*, Ed. 10, vol. 1. 824 pp. Salvii, Holmiae.

Linnaeus, C. 1761. *Fauna svecica sistens animalia sveciae regni.* Ed. 2. xlviii, 578 pp., 2 pls. Salvii, Stockholmiae.

Lioy, P. 1864. I ditteri distribuiti secondo un nuovo metodo di classificazione naturale. *Atti dell'Istituto Veneto di Scienze, Lettere ed Arti*, (3)**9**(2): 1311–1352.

Macquart, P.J.M. 1834. Insectes diptères du Nord de la France. Athéricères: Creophiles, Oestrides, Myopaires, Conopsaires, Scénopiniens, Céphalopsides. *Mémoires de la Société (Royale) des Sciences, de l'Agriculture et des Arts de Lille*, **1833**: 137–368.

Meigen, J.W. 1803. Versuch einer neuen Gattungs Eintheilung der europäischen zweiflügeligen Insekten. *Magazin für Insektenkunde (Illiger)*, **2**: 259–281.

Melander, A.L. 1965. Family Empididae. Pp. 446–481 *in* Stone, A., Sabrosky, C.W., Wirth, W.W., Foote, R.H. & Coulson, J.R. (Eds.), *A catalog of the Diptera of America north of Mexico.* Agricultural Handbook No. 276. iv, 1696 pp. United States Department of Agriculture, Washington.

Panzer, G.W.F. [1794], 1798. *Faunae Insectorum Germanicae initia oder Deutschlands Insecten*, Heft 22. 24 pp., 24 pls. ([1794]); Heft 54. 24 pp., 24 pls. (1798). Nürnburg.

Panzer, G.W.F. 1804. *D.J.C. Schaefferi Icones Insectorum Ratisbonensium ..., Editio nova*, vol. 4 (*D.J.C. Schaefferi Iconum Insectorum circa Ratisbonam indigenorum enumeratio systematica opera et studio D. Georg. Wolfgang. Francisc. Panzeri. (Systematische Nomenclatur über ... J.C. Schäffers ... Abbildungen, Ec)*). Erlangae.

Papavero, N. 1971. Family Conopidae. Pp. 9–10 *in* (Ed.), *A catalogue of the Diptera of the Americas south of the United States.* No. 47, 24 pp. Museu de Zoologica, Universidade de São Paulo.

Robineau-Desvoidy, A.J.B. 1853. Diptères des environs de Paris (1). Famille des Myopaires. *Bulletin de la Société des Sciences Historiques et Naturelles de l'Yonne*, **7**: 83–160.

Schaeffer, J.C. 1766a. *Elementa entomologica.* 168 pp., 135 pls. Weiss, Ratisbonae.

Schaeffer, J.C. [1766b], [1779]. *Icones Insectorum circa Ratisbonam indigenorum coloribus naturam referentibus expressae.* Vol. 1, pls. 1–100 ([1766]); vol. 3, pls. 201–280 ([1779]). Regensburg.

Schiner, I.R. 1861. Vorläufiger Commentar zum dipterologischen Theile der 'Fauna austriaca'. III. *Wiener Entomologische Monatschrift*, **5**: 137–144.

Scopoli, J.A. 1763. *Entomologia carniolica exhibens insecta carnioliae indigena et distributa in ordines, genera, species, varietates. Methodo Linneana.* [xxxiv], 421, [1] pp., 43 pls. Trattner, Vindobonae.

Smith, K.G.V & Peterson, B.V. 1987. Conopidae. Pp. 749–756 *in* McAlpine, J.F. (Ed.), *Manual of Nearctic Diptera*, vol. 2. Pp. vi, 675–1332. Monograph no. 28. Biosystematics Research Centre, Ottawa.

Case 2835

Alestes Müller & Troschel, 1844 (Osteichthyes, Characiformes): conservation proposée

Jacques Géry & Volker Mahnert
c/o Muséum d'Histoire Naturelle, CP 6434, 1211 Genève 6, Switzerland

Résumé. L'objet de la présente requête est la conservation du nom *Alestes* Müller & Troschel, 1844 (famille des ALESTIDAE Hoedman, 1951), utilisé depuis 150 ans pour un groupe de poissons d'eau douce africains comprenant (au sens large) une quarantaine d'espèces et répandu depuis le Sénégal jusqu'au Natal. Ce nom est actuellement un synonyme subjectif récent du nom inutilisé *Myletes* Cuvier, 1814, dont on propose ici la suppression.

Abstract. The purpose of this application is to conserve the name *Alestes* Müller & Troschel, 1844 (family ALESTIDAE Hoedman, 1951) which has been in use for 150 years for a group of African freshwater fishes which comprises (in the broad sense) some 40 species, distributed from Senegal to Natal. At present *Alestes* is a junior subjective synonym of the unused name *Myletes* Cuvier, 1814, for which suppression is proposed.

---

1. Dans le Mémoire de Cuvier (1814, p. 75), présenté par M. Anselme Desmarest, le genre *Myletes* est proposé pour la première fois en ces termes:

'M. Cuvier fait le genre *Myletes* des characins à dents prismatiques triangulaires, tels que le raii du Nil ou *Salmo dentex* d'Hasselquist, et le *Salmo niloticus* de Forskahl, ainsi que de quelques espèces des mers d'Amérique, dont le ventre est comprimé et dentelé. Leurs mâchoires sont conformées commes celles des poissons des deux genres précédents' [c'est-à-dire 'le genre *serrasalme* de M. de Lacépède' et 'le genre *tétragonoptère* de Seba'].

(Le second genre nouveau proposé, *Hydrocin*, comprend 'le *Characin dentex* de Geoffroy Saint-Hilaire ou le *Salmo dentex* de Forskahl', qu'il ne faut pas confondre avec le précédent, le *Salmo dentex* d'Hasselquist). Une réédition du Mémoire a été présentée sous le même titre l'année suivante (Cuvier, 1815, p. 115), sous une forme un peu différente. Les orthographes *Mylites*, indiquée par Minding (1832, p. 121) et *Mylestes*, indiquée par Monod (1950, p. 49, note 1), n'apparaissent pas dans la publication originale du nom.

2. Une seule espèce est nommée lors de l'établissement du genre, *Salmo dentex* Hasselquist (*Salmo niloticus* Forsskål, 1775, p. 66; cf. Cuvier, 1816, p. 167, note 2; Günther, 1864, p. 12; Valenciennes, 1849, pp. 185–186; et tous les auteurs suivants). Il ne fait aucun doute que dans l'esprit de Cuvier (qui a précisé le fait en 1816 et 1818) il n'y a qu'une seule forme africaine, provenant du Nil. Les autres espèces 'des mers d'Amérique' ne sont pas citées nominativement. Cuvier ne donne pas de date pour le nom établi par Hasselquist. L'ouvrage de cet auteur (Hasselquist, 1757) dans lequel le nom est apparu pour la première fois (pp. 395–398), est pré-linnéen; la traduction

allemande (1762) a été rejetée pour des raisons nomenclaturales (Opinion 57, mars 1914; Direction 32, mai 1956). *Salmo dentex* Hasselquist, 1762 (pp. 437–439) est de ce fait un nom indisponible. Le deuxième nom cité, *Salmo niloticus* 'Forsskal, 1775', i.e. Linné, 1758, un synonyme subjectif de *Cyprinus dentex* Linné, 1758, p. 325 (voir paragraphe 4 ci-dessous), fondé sur *Salmo dentex* Hasselquist, 1757, est donc l'espèce-type de *Myletes* par monotypie. Il ne s'agit pas d'une espèce-type par désignation ultérieure des 'Disciples de Cuvier' ([1842], pp. 265–266, pl. 103, figs. 1, 1a, où une seule espèce africaine est figurée), comme indiqué par Travassos (1952, p. 159), repris par Géry (1972, p. 161; 1976, p. 48) et Paugy (1984, p. 140). En 1816 Cuvier (pp. 166–167, 167 note 2) décrit *Myletes* avec la seule espèce *Cyprinus dentex*, citant *Salmo dentex* Hasselquist et *S. niloticus* Forsskål comme synonymes. Linné avait décrit un spécimen de *C. dentex* dans le vol. 2 (p. 108) de son *Museum Adolphi Friderici*, ouvrage complété dès 1754 mais non publié avant 1764 (voir Fernholm & Wheeler, 1983, p. 203; ces auteurs (pp. 214–215) ont mentionné un spécimen (N° NRM LP 49) de la collection linnéenne à Stockholm (qui peut effectivement être le spécimen décrit par Hasselquist) comme type de l'espèce).

3. En 1818, Cuvier (pp. 444–456) consacre un Mémoire aux *Myletes*, dans lequel (pp. 451–454, pl. 21, fig. 3, pl. 22, figs. 1–3) les espèces américaines (*M. macropomus*, *M. rhomboidalis*, *M. duriventris* et *M. brachypomus*) sont nommées pour la première fois, après une description complète de *Myletes dentex* accompagnée de sa synonymie. Depuis ce Mémoire, et en se fiant à Müller & Troschel (1844), la plupart des ichtyologistes (sauf, comme on le verra, Gill (1896a,b), Eigenmann & Ogle (1907), Eigenmann (1909) et Travassos (1951, 1952)) ont traité *Myletes* comme un genre sud-américain. Jordan (1917, p. 93) cite à tort *M. rhomboidalis* comme l'espèce-type; ultérieurement (1920, p. 467) il reconnaîtra l'espèce-type par monotypie et corrigera son erreur. Il est dommage que Eschmeyer & Bailey (1990, p. 256) se réfèrent seulement à Jordan (1917), et donnent *M. rhomboidalis* comme espèce-type, tout en datant le genre de 1815, en le donnant comme valide dans les SERRASALMIDAE d'après une lecture incorrecte de Géry (1976, p. 48) mais en remarquant 'needs more research'.

4. Il est admis depuis longtemps (voir Forsskål, 1775, p. 66) que le nom *Salmo niloticus* Linné, 1758 (p. 312) se rapporte au même taxon que *Cyprinus dentex* Linné, 1758 (pp. 325–326). Récemment, trois spécimens de la collection linnéenne de Stockholm (N° NRM LP 79), étiquetés *Salmo niloticus*, ont été identifiés comme *Alestes* sp. (Fernholm & Wheeler, 1983, pp. 213–214). Valenciennes (1849, pp. 185–187) est le premier réviseur à avoir fixé la primauté de *C. dentex* sur *S. niloticus*. La description de Linné (1758 et 1764) de *S. niloticus* s'applique à un taxon distinct de *S. niloticus* Hasselquist, 1757 (p. 378; répété en 1762, p. 422). Bonnaterre (1788, p. 169) a renommé *Salmo nefasch* le *S. niloticus* de Hasselquist, ultérieurement désigné (comme '*Characinus nefasch* Geoffroy') comme espèce-type par monotypie de *Distichodus* Müller & Troschel, 1844 (p. 87; famille des DISTICHODIDAE). Daget & Gosse (1984, p. 185) ont incorrectement cité *S. niloticus* Linné comme espèce-type de *Distichodus* (voir aussi Fernholm & Wheeler, 1983, p. 214).

5. Cuvier (1818, p. 449, pl. 21, fig. 2) a proposé le nom de remplacement *Myletes hasselquistii* pour *Salmo dentex* Hasselquist et *Cyprinus dentex* Linné, en raison de la confusion de l'usage de ces derniers noms avec ceux d'autres espèces. Le nom *M. hasselquisti* [sic] a été adopté par Valenciennes (1849, p. 180).

6. Müller & Troschel (1844, p. 88) décrivent le genre *Alestes* en citant les deux espèces du Nil '*Alestes niloticus* Nob. (*Cyprinus dentex* Linn.; *Salmo dentex* Hasselquist; *Characinus niloticus* Geoffroy Saint-Hilaire; *Myletes hasselquistii* Cuvier)' et '*Alestes nurse* Nob. (*Myletes nurse* Rüppell)'. Ils réservent (pp. 96–98) le genre *Myletes* à 12 espèces sud-américaines énumérées ou décrites. Ceci est répété dans Müller & Troschel (1845, pp. 12–13, 35–39, pl. 22, fig. 6, pl. 9, fig. 3, pl. 10, figs. 1, 2, 2a) où d'autres espèces, certaines illustrées, sont placées dans les deux genres. L'espèce-type d'*Alestes* n'est pas désignée. L'espèce-type par désignation ultérieure (Jordan, 1919, p. 221) est *Salmo* [recte *Characinus*] *niloticus* Geoffroy Saint-Hilaire, 1809 (p. 49, pl. 4, fig. 2), fondé par référence à *Cyprinus dentex* Linné, 1758. Travassos (1951, p. 214; 1952, p. 161) accepte que le type ('*Cyprinus dentex* Linné, 1758 = *Salmo niloticus* Geoffroy, 1809') ait bien été désigné par Jordan, et déclare justement *Alestes* invalidé par *Myletes* pour cause d'isogénotypie. Paugy (1984, p. 140) admet *Salmo niloticus* Geoffroy Saint-Hilaire ('= *Alestes dentex* (Linné, 1758)') comme type, en datant sa désignation de Jordan, et en citant Géry (1968, p. 173, note infrapaginale). Eschmeyer & Bailey (1990, p. 19) indiquent comme type, sans citer correctement Jordan, '*Characinus niloticus* Geoffroy St. Hilaire... by subsequent designation...type above as given by Jordan', en ajoutant 'Earliest type designation not researched'.

7. Entre l'érection de *Alestes* par Müller & Troschel (1844), et la désignation de son espèce-type par Jordan (1919), les auteurs suivants ont cité ce nom générique à la place de son synonyme plus ancien. Valenciennes (1849, pp. 179, 192), Duméril (1856, pp. 458, 463) et Günther (1864, pp. 312, 372; 1880, pp. 608, 613) réservent le genre *Myletes* aux espèces américaines et le genre *Alestes* aux espèces africaines; Peters (1852, p. 276), Regan (1908, p. xxi) et Boulenger (1909, p. 190) adoptent *Alestes* comme le nom générique pour les taxa africains. Eigenmann & Eigenmann (1891, pp. 14, 60–61) emploient *Myletes* comme un nom général pour 33 espèces sud-américaines, y compris celles décrites par Cuvier (1818) (mais sans donner d'indication sur l'emploi de ce genre pour les espèces africaines). En revanche, d'autres auteurs ont correctement traité le genre *Myletes*. Gill (1896a, p. 209) cite la sous-famille des MYLETINAE qui comprend '*Myletes dentex*, Linnaeus', avec en synonymie '*Alestes dentex* Sagemehl, 1885'. Dans une publication suivante consacrée au genre *Characinus* et à l'histoire de la nomenclature des Characini sensu Linné, Gill (1896b, p. 214) retrace l'histoire de *Myletes* en rappelant son espèce-type et en créant le genre *Myloplus* pour certaines espèces sud-américaines: '. . .The *Myletes niloticus* or *dentex* is the *Alestes kotschyi* (not *dentex*) of Günther, and as it was the only described species for which Cuvier originally framed the genus, it should retain the former generic name. The South American species referred to *Myletes* should take the name *Myleus* of Müller and Troschel [1844, p. 98]. This genus has been divided into two subgenera, *Myletes* and *Myleus*. For the former, *Myloplus* may be taken as a substitute...'. (L'espèce-type de *Myloplus*, *Myletes asterias* Müller & Troschel, 1844, a été désignée par Eigenmann, 1912, p. 390). Gill, en note de bas de p. 214, remarque: 'Dr. Günther went back for *Myletes* only to Cuvier, Mém. Mus., IV, p. 444 [1818], when the South American species attributed to it were first described'. Eigenmann & Ogle (1907, p. 29) citent les deux espèces africaines *dentex* et *baremose* comme des *Myletes*, et Eigenmann (1909, p. 258) traite, dans sa clé des TETRAGONOPTERINAE, le genre *Myletes* (africain) de la même manière que *Alestes* est traité par les auteurs

modernes, montrant par là qu'il considère *Alestes* comme un synonyme de *Myletes*. Travassos (1951, p. 214; 1952, p. 161) démontre que *Myletes* Cuvier invalide *Alestes* Müller & Troschel et *Myletes* Mulsant & Verreaux, 1874 (Aves, un homonyme plus récent, genre d'Oiseaux-mouches (famille de TROCHILIDAE) considéré comme un synonyme subjectif de *Amazilia* Lesson, 1828).

8. Les quatre espèces nominales de *Myletes* décrites par Cuvier (1818) et placées dans *Myletes* ont été ensuite incluses dans d'autres genres (voir Géry, 1976, pp. 48–49). *M. rhomboidalis* est inclus dans *Myleus* Müller & Troschel, 1844, sous-genre *Prosomyleus* Géry, 1972; *M. duriventris* dans *Mylossoma* Eigenmann, 1903, *M. macropomus* dans *Colossoma* Eigenmann, 1903, et *M. brachypomus* dans *Piaractus* Eigenmann, 1903. Depuis 1909, à l'exception de Travassos (1951, 1952), de Poll (1976, p. 46, qui écrit à tort 'A l'origine le type adopté [de *Myletes*] était *Myletes guile* Joannis [1835], synonyme de *Alestes nurse* Rüppell [1832]'), et d'autres listes ou catalogues, et malgré la mise au point de Gill (1896a, 1896b), c'est le synonyme le plus récent, *Alestes*, qui est employé. *Myletes* a été inemployé en systématique zoologique depuis plus de 80 ans si l'on ne tient pas compte des citations purement nomenclaturales. Il serait nuisible à la stabilité de la nomenclature de revenir en arrière. Une telle action, bien que conforme au Code, rendrait caduc, non seulement le genre *Alestes* qui a fait l'objet de nombreux travaux au cours des 50 dernières années (voir, par exemple, Blache, 1964; Daget & Iltis, 1965; Jubb, 1967; Géry, 1968, 1977; Paugy, 1984; Lévèque, Paugy & Teugels, 1990), et dont certaines espèces sont d'importance économique en Afrique, mais aussi le nom de la famille des ALESTIDAE Hoedeman, 1951 (publié comme Alestidi), reconnue par certains auteurs. Dans l'intérêt de la stabilité de la nomenclature et au nom d'un usage continu, nous demandons que le nom *Myletes* soit supprimé.

9. En conséquence, il est demandé à la Commission Internationale de Nomenclature Zoologique:

(1) d'user de ses pleins pouvoirs pour supprimer le nom générique *Myletes* Cuvier, 1814 à l'égard du Principe de Priorité mais non du Principe d'Homonymie;

(2) de placer sur la Liste Officielle des Noms Génériques en Zoologie le nom *Alestes* Müller & Troschel, 1844 (genre: masculin), espèce-type par désignation ultérieure de Jordan (1919) *Characinus niloticus* Geoffroy Saint-Hilaire, 1809 (un synonyme subjectif plus récent de *Cyprinus dentex* Linné, 1758);

(3) de placer sur la Liste Officielle des Noms Spécifiques en Zoologie le nom *dentex* Linné, 1758, publié dans le binôme *Cyprinus dentex* (un synonyme subjectif plus ancien du nom spécifique de *Characinus niloticus* Geoffroy Saint-Hilaire, 1809, l'espèce-type de *Alestes* Müller & Troschel, 1844);

(4) de placer sur l'Index Officiel des Noms Génériques Rejetés et Invalides en Zoologie le nom *Myletes* Cuvier, 1814, supprimé ci-dessus en (1);

(5) de placer sur l'Index Officiel des Noms Spécifiques Rejetés et Invalides en Zoologie le nom *hasselquistii* Cuvier, 1818, publié dans le binôme *Myletes hasselquistii* (un synonyme objectif plus récent de *Cyprinus dentex* Linné, 1758).

Références

Blache, J. 1964. *Les poissons du bassin du Tchad et du bassin adjacent du Mayo Kebbi. Étude systématique et biologique*. 483 pp., 147 figs. ORSTOM, Paris.

Bonnaterre, J.P. 1788. *Tableau encyclopédique et méthodique des trois règnes de la nature. Ichthyologie*. lvi, 215 pp., 102 pls. Panckoucke, Paris.

Boulenger, G.A. 1909. *Catalogue of the fresh-water fishes of Africa in the British Museum (Natural History)*, vol. 1. xi, 373 pp. British Museum (Natural History), London.

Cuvier, G. 1814. Mémoire sur la composition de la mâchoire supérieure des poissons, et sur le parti qu'on peut en tirer pour la distribution méthodique de ces animaux [présenté par M. Anselme Desmarest]. *Bulletin des Sciences, par la Société Philomatique de Paris*, **1814**: 73–78.

Cuvier, G. 1815. Mémoire sur la composition de la mâchoire supérieure des poissons, et sur le parti que l'on peut en tirer pour la distribution méthodique de ces animaux. *Mémoires du Muséum d'Histoire Naturelle*, **1**(2): 102–132.

Cuvier, G. 1816. *Le règne animal distribué d'après son organisation*, vol. 2. xviii, 532 pp. Déterville, Paris.

Cuvier, G. 1818. Sur les poissons du sous-genre *Myletes*. *Mémoires du Muséum d'Histoire Naturelle*, **4**: 444–456.

Cuvier, G. [1842]. Les raiis (*Myletes* Cuv.). Pp. 265–266 *in*: *Le règne animal distribué d'après son organisation*. Edition accompagnée de planches gravées ... par une réunion de disciples de Cuvier [A.V. Audouin et al.]. Les poissons. Fortin, Masson et Cie, Paris.

Daget, J. & Gosse, J.-P. 1984. Distichodontidae. Pp. 184–211 *in* Daget, J., Gosse, J.P. & Thys van den Audenaerde, D.F.E. (Eds.), *Catalogue des poissons d'eau douce d'Afrique* (CLOFFA), vol. 1. xviii, 410 pp. ORSTOM, Paris.

Daget, J. & Iltis, A. 1965. *Poissons de Côte d'Ivoire (eaux douces et saumâtres)*. 385 pp., 212 figs., 4 pls. IFAN-DAKAR.

Duméril, A.M.C. 1856. Ichthyologie analytique ou classification des poissons, suivant la méthode naturelle, à l'aide de tableaux synoptiques. *Mémoires de l'Académie des Sciences*, **27**(1): 1–511.

Eigenmann, C.H. & Eigenmann, R.S. 1891. A catalogue of the fresh-water fishes of South America. *Proceedings of the United States National Museum*, **14**: 1–81.

Eigenmann, C.H. 1909. The fresh-water fishes of Patagonia and an examination of the Archiplata-Archhelenis theory. Pp. 225–374, pls. 30–37 *in*: *Reports of the Princeton University Expeditions to Patagonia 1896-1899*, vol. 3 (Zoology), part 3. The University of Princeton, Princeton.

Eigenmann, C.H. 1912. The freshwater fishes of British Guiana, including a study of the ecological grouping of species, and the relation of the fauna of the plateau to that of the lowlands. *Memoirs of the Carnegie Museum*, **5**: 1–578.

Eigenmann, C.H. & Ogle, F. 1907. An annotated list of characin fishes in the United States National Museum and the Museum of Indiana University, with descriptions of new species. *Proceedings of the United States National Museum*, **33**(1556): 1–36.

Eschmeyer, W.N. & Bailey, R.M. 1990. Genera of Recent fishes. Pp. 7–433 *in* Eschmeyer, W.N., *Catalog of the genera of Recent fishes*. v, 697 pp. California Academy of Sciences, San Francisco.

Fernholm, B. & Wheeler, A. 1983. Linnaean fish specimens in the Swedish Museum of Natural History, Stockholm. *Zoological Journal of the Linnean Society*, **78**(3): 199–286.

Forsskål, P. 1775. *Descriptiones animalium. Avium, amphibiorum, piscium, insectorum, vermium; quae in itinere Orientali ... post mortem auctoris edidit Carsten Niebuhr ...* 164 pp., 1 pl. Heineck & Faber, Hauniae.

Geoffroy Saint-Hilaire, E. 1809. Histoire naturelle des poissons du Nil. Pp. 1–52, 27 pls. *in*: *Description de l'Egypte, histoire naturelle*, vol. 1. Imprimerie Impériale, Paris.

Géry, J. 1968. Un essai de sytématique quantitative: la classification des espèces du genre *Alestes s. lat.* (Pisces, Characoidei). *Vie et Milieu*, (A, Biologie Marine)**19**(1): 171–193.

Géry, J. 1972. Poissons characoïdes des Guyanes. I. Généralités. II. Famille des Serrasalmidae. *Zoologische Verhandelingen*, **122**: 1–250.

Géry, J. 1976. Les genres de Serrasalmidae (Pisces, Characoidei). *Bulletin Zoologisch Museum Universiteit van Amsterdam*, **5**(6): 47–54.

Géry, J. 1977. *Characoids of the world*. 672 pp., numerous unnumbered pls. T.F.H. Publications, Hong Kong.

Gill, T. 1896a. The differential characters of characinoid and erythrinoid fishes. *Proceedings of the United States National Museum*, **18**(1056): 205–209.

Gill, T. 1896b. Note on the fishes of the genus *Characinus*. *Proceedings of the United States National Museum*, **18**(1058): 213–215.

Günther, A. 1864. *Catalogue of the fishes in the British Museum*, vol. 5. xxii, 455, 8 pp. British Museum, London.

Günther, A. 1880. *An introduction to the study of fishes*. xvi, 720 pp. Black, Edinburgh.

Hasselquist, F. 1757. *Iter palestinum, eller Resa til Heliga Landet förrättad ifrån År 1749 til 1752, med beskrifningar ... utgifven af Carl Linnaeus.* [xiv], 619 pp. Stockholm.

Hasselquist, F. 1762. *D. Friedrich Hasselquists ... Reise nach Palästina in den Jahren von 1749 bis 1752. Herausgegeben von Carl Linnaeus ... Aus dem Schwedischen* (by T.H. Gadebusch). [xviii], 606 pp. Rostock.

Hoedeman, J.J. 1951. Studies on African characid fishes. 1. The tribe Alestidi. *Beaufortia*, **1**(3): 1–8.

Jordan, D.S. 1917, 1919, 1920. *The genera of fishes*. Part 1, pp. 1–161 (1917); part 2, pp. ix, 163–284, xiii (1919); part 4, pp. 411–576, xviii (1920). Stanford University, California.

Jubb, R.A. 1967. *Freshwater fishes of Southern Africa*. 248 pp., 272 figs., 67 pls. Balkema, Cape Town.

Lévèque, C., Paugy, D. & Teugels, G.G. (Eds.). 1990. Faune des poissons d'eau douce et saumâtre de l'Afrique de l'Ouest. *Faune Tropicale*, **28**: 1–384.

Linné, C. 1758. *Systema Naturae*, Ed. 10, vol. 1. 824 pp. Salvii, Holmiae.

Linné, C. 1764. *Museum S:ae R:ae M:tis Adolphi Friderici Regis ... Aves, Amphibia, Pisces describuntur. Tomi Secundi Prodromus.* 111 pp. Salvii, Holmiae.

Minding, J. 1832. *Lehrbuch der Naturgeschichte der Fische*. xii, 131 pp., 1 pl.

Monod, T. 1950. Notes d'ichtyologie ouest-africaine. *Bulletin de l'Institut Français d'Afrique Noire*, **12**(1): 1–71.

Müller, J. & Troschel, F.H. 1844. Synopsis generum et specierum familiae Characinorum (Prodromus descriptionis novorum generum et specierum). *Archiv für Naturgeschichte*, **10**(1): 81–99.

Müller, J. & Troschel, F.H. 1845. *Horae ichthyologicae. Beschreibung und Abbildung neuer Fische*, Hefts 1 und 2. 40 pp., 11 pls. Veit & Comp, Berlin.

Mulsant, M.E. & Verreaux, J.B.E. 1874. *Histoire naturelle des oiseaux-mouches ou colubris constituant la famille des trochilidés*, vol. 1. 343 pp. Société Linnéenne, Lyon.

Paugy, D. 1984. Characidae. Pp. 140–160 *in* Daget, J., Gosse, J.-P. & Thys van den Audenaerde, D.F.E. (Eds.), *Catalogue des poissons d'eau douce d'Afrique* (CLOFFA), vol. 1. xviii, 410 pp. ORSTOM, Paris.

Peters, [W.C.H.] 1852. Einige neue Säugethiere und Flussfische aus Mossambique vor. *Bericht Akademie der Wissenschaften zu Berlin*, **1852**: 273–276.

Poll, M. 1976. Poissons. *Exploration du Parc national de l'Upemba. Mission G.F. de Witte*, **73**: 1–127.

Regan, C.T. 1908. Pisces. Introduction. Pp. i–xxxii *in* Godman, F.D. & Salvin, O. (Eds.), *Biologia Centrali-Americana*. Porter, London.

Rüppell, E. 1832. *Fortsetzung der Beschreibung und Abbildung mehrerer neuer Fische, in Nil endeckt*. 14 pp., 3 pls. Frankfurt.

Sagemehl, M. 1885. Das Cranium der Characiniden nebst allgemeinen Bemerkungen über die mit einem Weber'schen Apparat versehenen Physostomenfamilien. *Morphologisches Jahrbuch*, **10**: 1–119.

Travassos, H. 1951, 1952. Catálogo dos géneros e subgéneros da subordem Characoidei (Actinopterygii-Cypriniformes). *Dusenia*, **2**: 205–224 (1951); **3**: 141–180 (1952).

Valenciennes, A. 1849. Suite de la famille des Salmonoïdes. *In* Cuvier, G. & Valenciennes, A., *Histoire naturelle des poissons*, vol. 22. xx, 92, 532 pp. Bertrand, Paris.

Comment on the proposed stabilization of usage of the name *Ceratites nodosus* (Mollusca, Ammonoidea)
(Case 2732; see BZN **48**: 31–35, 246; **49**: 145–149, 290; **50**: 54–56, 141–142, 229–231, 284–285)

Gerhard Hahn
Institut für Geologie und Paläontologie, Philipps-Universität, D-3550 Marburg, Germany

Dr N.J. Silberling (BZN **50**: 141) has disputed my previous comment (BZN **48**: 246) that Urlichs's application will conserve the name *Ceratites nodosus* as used today. My comment referred to the biostratigraphical use of the name *nodosus* in Central Europe. The name (in the sense recommended by Urlichs) has been used here for a long time to denote a special index-fossil of the Upper Muschelkalk, and the '*nodosus*-Zone' is well known to geologists. To change the name of this index-fossil (as would result from Tozer's counter proposals on BZN **49**: 148) would cause very much confusion amongst geologists, quite apart from the taxonomic and nomenclatural aspects which have been mentioned by the opponents of Urlichs's application. It is notewothy that most of these opponents come from regions where the practical consequences of the application are of little concern because the lithology of the Triassic strata is different from that in Central Europe.

Comments on the proposed conservation of the specific name of *Notonecta obliqua* Thunberg, 1787 (Insecta, Heteroptera)
(Case 2829; see BZN **50**: 118–120)

(1) I.M. Kerzhner
Zoological Institute, Academy of Sciences, St Petersburg 199034, Russia

1. The purpose of the application by Jansson & Polhemus is to suppress the name *Notonecta marginata* Müller, 1776 in order to conserve *Notonecta obliqua* Thunberg, 1787. The basis of the application was their acceptance of Kirkaldy's (1897) view that *N. marginata* is conspecific with *Notonecta furcata* Fabricius, 1794, which is itself a synonym of *N. obliqua*. However, I do not accept Kirkaldy's synonymy but rather Reuter's (1888) synonymy of *N. marginata* with the corixid *Cymatia coleoptrata* (Fabricius, [1777]). I base this on the following four lines of evidence:

a. Müller (1776) included in the genus *Notonecta* five species in two dissimilar groups of waterbugs, the notonectids and the corixids. The first two species listed — *Notonecta glauca* Linnaeus and *Notonecta lutea* sp. nov. — are notonectids. Following their description is a note indicating their common features and differences. The third and fifth species are corixids, the third being *N. striata* Linnaeus, 1758 and the fifth *N. minutissima* Linnaeus, 1758. Placed between them was the fourth species — *N. marginata*. This would be an appropriate position for the corixid *C. coleoptrata*, which is similar in appearance to the preceding and following species and intermediate in size between them. In contrast, *N. obliqua* is very dissimilar to the third and fifth species and much larger than them and would fit much better with Müller's

first two species; it is most unlikely that Müller would have placed it in the position of the fourth species.

b. The original description of *N. marginata* — 'elytris nigris: margine suturaque luteis' — agrees well with *C. coleoptrata*, accepting that 'niger' can be translated 'dark' as well as 'black', that 'margine suturaque luteis' should be translated as 'with the margin and suture yellow' and not 'sutural margin yellow', and that the suture refers to the line of contact of hemelytra rather than to their whole inner margin. It is clear from a number of dictionaries that in classical Latin 'piceus' is black, 'fuscus' is brown to black and 'niger' is dark, although in medieval Latin 'niger' is used for black. Fabricius used 'fuscus' in describing hemelytra of both *C. coleoptrata* and *N. furcata* (= *obliqua*). I do not consider that Müller's use of 'niger' in describing *N. marginata* implies any difference from *C. coleoptrata*.

c. In *C. coleoptrata* the hemelytra are greyish to blackish brown with a wide yellowish lateral margin and very narrow yellow sutural margin. The yellowish longitudinal stripes on hemelytra mentioned by Jansson & Polhemus (para. 4) are often indistinct, especially if dark specimens are examined with only a hand lens; it is therefore not surprising that Fabricius did not mention them in his original description of *C. coleoptrata*. In contrast, the hemelytra in *N. obliqua* are black or blackish brown with two large obliquely longitudinal yellow spots or stripes at their base, the inner spot being towards the inner basal margin of the hemelytra and more or less touching it at the base, but not touching the sutural margin. The lateral and sutural margins have a narrow yellow area which is much less apparent than the basal spots. Fabricius's (1794, p. 58) description of *N. furcata* reads 'elytris nigricantibus, maculis duabus oblongis baseos flavescentibus' which can be translated 'hemelytra blackish, with two oblong yellowish spots at the base'. Fabricius did not say anything about the yellow outer and sutural margins. I do not think that this description of *N. obliqua* can be applied to *N. marginata*.

d. *C. coleoptrata* is the only European corixid fitting Müller's description of *N. marginata*.

2. I should like to refer to the authorship of the name *N. obliqua* which should be credited to Thunberg and not to Gallén. Thunberg's work consists of dissertations by his students. In Scandinavian countries in the 18th and first half of the 19th centuries, so-called 'academic dissertations' were prepared by university professors — referred to in the title as 'praeses' (presiding over the meeting). Students — referred to in the title as 'respondens' (respondent) — paid for the preparation and publication of the dissertations (see Broberg, 1978). These dissertations were defended to demonstrate the acumen of the students in public scientific debate in Latin rather than their scientific ability. This procedure was widely used by zoologists such as Linnaeus, Fallén, Thunberg and R.F. Sahlberg for the publication of their scientific works. It is virtually universal practice to credit the publications and hence any names therein to these zoologists and not to the students. Esaki was unaware of this when he credited the name *N. obliqua* to 'Gallén in Thunberg', and he was followed by later authors. This error should not be perpetuated. Since *N. obliqua* has been involved in confusing synonymy it would still be desirable to place it on the Official List.

Additional reference

Broberg, G. 1978. *Brown-eyed, nimble, hasty, did everything promptly. Carl Linnaeus 1707–1778.* 52 pp. Liber Tryck, Stockholm.

(2) Antti Jansson
Zoological Museum, P.O. Box 17, FIN-00014 University of Helsinki, Finland

I am most grateful to Dr I.M. Kerzhner for his comments (above) on this application. I accept his argument that *Notonecta marginata* is a senior subjective synonym not of *N. obliqua*, as Dr Polhemus and I believed when submitting our application, but of *Sigara coleoptrata* (now in *Cymatia*). Resurrecting the long-unused name *N. marginata* would cause considerable confusion since *C. coleoptrata* is well known in the recent literature (for example, Bernhardt, 1985, p. 6; Nieser, 1978, p. 282; Savage, 1989, six entries; a further 26 references by 28 authors over the last 35 years are held by the Commission Secretariat). It follows that the Commission should be asked to conserve the name *S. coleoptrata* and place it on the Official List. The lectotype of *C. coleoptrata* is a male specimen in the Copenhagen Museum (see Jansson, 1986, p. 21).

I agree with Dr Kerzhner that *N. obliqua* should still be placed on the Official List. As stated in para. 2 of my application with Dr Polhemus the original material seems no longer to exist. It is possible that a suitable neotype could be selected from the collections of the Swedish Museum of Natural History, but this seems unnecessary at this time since there is no dispute about the identity of the species. I agree with Dr Kerzhner that authorship of *N. obliqua* should be attributed to Thunberg and not to Gallén; indeed, our application to the Commission was originally so framed.

The three requests made to the Commission in para. 5 of my application with Dr Polhemus still stand, except that authorship of *Notonecta obliqua* should be attributed to Thunberg and not Gallén in Thunberg. The following request is now added:

(4) to place on the Official List of Specific Names in Zoology the name *coleoptrata* Fabricius, [1777], as published in the binomen *Sigara coleoptrata*.

Additional reference

Jansson, A. 1986. The Corixidae (Heteroptera) of Europe and some adjacent regions. *Acta Entomologica Fennica*, **47**: 1–94.

Comments on the proposed conservation of usage of some generic names in the BUPRESTIDAE (Insecta, Coleoptera)
(Cases 2837/1 and 2837/2; see BZN **50**: 27–30, 31–34, 56, 232–233)

(1) Hans Mühle
Hofangerstrasse 22a, D-81735 München, Germany

The comment by Rick Westcott, published in BZN **50**: 232–233, does not cover the whole story of the usage of the names *Melanophila* Eschscholtz, 1829 and *Phaenops* Dejean, 1833.

As noted in my application (para. 1), in 1829 Eschscholtz introduced the generic name *Melanophila* for two nominal species, *Buprestis appendiculata* Fabricius, 1792 (= *B. acuminata* De Geer, 1774) and *B. tarda* Fabricius, 1792 (= *B. cyanea* Fabricius, 1775). The name was accompanied by a short diagnosis. In 1833 Dejean introduced the generic name *Phaenops*. Among the included species were *appendiculata* Fabricius and *tarda* Fabricius.

After Lacordaire (1857) re-used the name *Phaenops* and adopted it for *B. tarda*, adding a description which allowed the genus to be recognized, entomologists in Europe adopted this name (paras. 5 and 6 of the application; comment by Booth on BZN **50**: 233). Théry (1942), apparently unaware of the earlier designation by Westwood ([1838]) of *tarda* (= *cyanea*) as the type species of *Melanophila*, designated *cyanea* as the type species of *Phaenops* in accordance with usage. Lacordaire retained *appendiculata* (= *acuminata*) in *Melanophila* and the name has consistently been used in the sense of this species as the type.

All authors are agreed that the *cyanea* group of species is distinct from the *acuminata* group and two taxa (now genera) have been recognized. However, strict adherence to the Code (i.e. adoption of Westwood's type designation) would mean rejecting the name *Phaenops* and placing it in the synonymy of *Melanophila*. This has not been done, either by Old World or New World authors.

Westcott comments that he cannot speak for the usage of generic names for the two species groups in the Old World. I can confirm that in the Old World literature nearly all authors have followed Lacordaire and Théry in the use of the names *Phaenops* and *Melanophila*, and to adopt now the name *Melanophila* for the *cyanea* group of species would be extremely confusing and destablizing. *Phaenops* is currently used and defined by many redescriptions and included species which bear no relation to the two-line description of *Melanophila* by Eschscholtz (1829). There are also many redescriptions of *Melanophila*, the last being that by Cobos (1986) in his key revision.

In summary, both the names *Phaenops* and *Melanophila* relate to well-defined groups and their usage is stable. I therefore urge that my proposal to designate *Buprestis acuminata* De Geer, 1774 as the type species of *Melanophila*, thereby ratifying longstanding practice and allowing the continued usage of both names, should be accepted.

(2) Richard L. Westcott
Oregon Department of Agriculture, 635 Capitol Street NE, Salem, Oregon, U.S.A.

I maintain that Hans Mühle's position does not take into account all matters in relation to the names *Melanophila* Eschscholtz, 1829 and *Phaenops* Dejean, 1833.

In his application (para. 1) Mühle says '... *Melanophila* has never been used in the sense of *tarda* as the type species ...'. Continuing this theme (para. 7), he says 'the name has not been used in this sense since 1857 ... To my knowledge authors since 1983 have not adopted Leraut's nomenclature for these two buprestid genera; its adoption would cause considerable and unnecessary confusion'. In the New World at least, and especially regarding 'confusion', nothing could be further from reality. In his comment (above), Mühle states that *Phaenops* has not been placed as a synonym of *Melanophila*. This is misleading because Leraut's (Old World) adoption of

Melanophila for the *tarda* (= *cyanea*) species group was made in 1983 and accepted by Nelson (1989).

The treatment of *Phaenops* at generic rank in the Nearctic literature is mostly of recent origin. It has been done only once in the past (Nelson, 1985) — then reversed. There certainly is now no disagreement that we are dealing with two generic taxa, as Mühle has pointed out (above); however, there certainly is disagreement over what names should be applied. For example, in North America we have several species of '*Phaenops*' that are of economic importance, some of which are known to cause serious damage in our forests. All our literature on this group (except Nelson, 1985), and it is considerable, will be found listed under the name *Melanophila* (see, for example, West, 1947). Four species of this group, which appear frequently in the literature, particularly concerning forestry, are listed under *Melanophila* in *Common names of insects and related organisms* published by the Entomological Society of America. The rejection of the name *Phaenops* as a synonym of *Melanophila* therefore causes very little confusion in North America, even with the necessity of adopting *Oxypteris* Kirby, 1837 for those species in the current subgenus *Melanophila* (*Melanophila*), i.e. typified by *Buprestis acuminata*, since none of these are of economic importance. However, I am concerned that this should not be a cause of confusion in the Old World literature relating to forestry and other fields of economic importance, particularly if this is extensive. I hope that entomologists will make known their views, resulting in greater clarification, so that a decision can be made as soon as feasible.

One last point, albeit a minor one: in the abstract to his application Mühle states that most species of *Phaenops* are Palaearctic. This is true, but according to Cobos (1986) it would be by a slim margin.

Additional reference

West, A.S. Jr. 1947. The California flatheaded borer (*Melanophila californica* Van Dyke) in ponderosa pine stands of northeastern California. *Canadian Journal of Research, Section D*, **25**: 97–118.

(3) G.H. Nelson
College of Osteopathic Medicine of the Pacific, College Plaza, Pomona, California 91766–1889, U.S.A.

I wish to comment on the two cases on buprestid names submitted by Hans Mühle. Both concern nomenclatural questions raised by Leraut (1983). I believe that the principle of priority should be followed unless doing so causes undue confusion and impractical results.

In the first case (no. 2837/1), the applicant seeks to conserve the current usage of the generic names *Poecilonota* Eschscholtz, 1829 and *Scintillatrix* Obenberger, 1956. I believe Mühle makes a good case for their conservation. The genus *Scintillatrix* is not found in the western hemisphere but nine species of *Poecilonota* are. While these species are not considered as important pests, they are often discussed in economic literature and are uniformly referred to under the name *Poecilonota*. Changing this to a new name would serve no useful purpose at this time and would, in fact, lead to considerable and unnecessary confusion. I therefore support this application.

In the second case (no. 2837/2), which involves the names *Melanophila* and *Phaenops*, the situation is not as clear-cut. Since the establishment of the name *Phaenops* by Dejean (1833), in the New World it was considered either as a synonym or as a subgenus of *Melanophila* Eschscholtz, 1829 for more than 100 years with few exceptions. Therefore, Mühle's contention that the name *Melanophila* has not been used since 1857 for species now considered under *Phaenops* is misleading, especially in relation to the literature on New World species. The recognition of *Phaenops* as a separate genus is recent enough (largely post-World War II) that, of the more than 15 valid species in the Nearctic fauna, all were described under *Melanophila* except for two described earlier under *Buprestis*. *Phaenops* was considered a subgenus of *Melanophila* as recently as 1987 by Bright. As Westcott has pointed out (BZN **50**: 232 and above), the economic literature is rather extensive, as well as uniform, in referring to the pests belonging to this group under the generic name *Melanophila*. Apparently, Mühle missed noticing the paper by Nelson (1989) (cited by Westcott, BZN **50**: 232) which dealt with the necessary changes to adjust to recognizing *Bupestris cyanea* Fabricius as the first designated type species of *Melanophila*. This would have those species most recently considered under *Phaenops* revert to *Melanophila*, under which most were described, and the species considered under *Melanophila* would be included under *Oxypteris*. This arrangement preserves intact the usage in the economic literature and was followed by Nelson (1993). I do not, therefore, concur with the proposals in this application.

Additional references

Bright, D.E. 1987. The metallic wood-boring beetles of Canada and Alaska. Coleoptera: Buprestidae. *The insects and arachnids of Canada*, part 15. 335 pp. Biosystematic Research Institute, Ottawa.

Nelson, G.H. 1993. Note on *Oxypteris hungarica* (Csiki) and a description of the female of *Xenorhipis mexicana* Nelson (Coleoptera: Buprestidae). *The Coleopterists' Bulletin*, **47**(2): 150.

Comments on the proposed conservation of the specific name of *Rivulus marmoratus* Poey, 1880 (Osteichthyes, Cyprinodontiformes)
(Case 2722; see BZN **47**: 191–194; **48**: 150–152)

(1) Wilson J.E.M. Costa
Laboratório de Ictiologia Geral e Aplicada, Departamento de Zoologia e Biologia Marinha, Universidade Federal do Rio de Janeiro, Cidade Universitária, Cx. Postal 68049, 21944 Rio de Janeiro RJ, Brazil

My work on the taxonomy of the *Rivulus ocellatus* species complex is progressing but is not yet complete. This very widespread group, which occurs from Florida to Santa Catarina (Brazil), comprises some very similar nominal species, such as *R. ocellatus* Hensel, 1868, *R. marmoratus* Poey, 1880, *R. bonairensis* Hoedeman, 1958 and *R. caudomarginatus* Seegers, 1984. No rigorous taxonomic studies have so far been made comparing material from the several different localities within this large area. I am not convinced that these nominal species represent a single taxonomic species, although I have not yet examined material from Cuba, one of the probable

type localities of *R. marmoratus*. However, based on available material, I have verified that hermaphrodite specimens of *R. ocellatus* from the type locality (Rio de Janeiro) are very different in body depth from hermaphrodite specimens from Florida.

I would be sorry if the Commission were to make so important a nomenclatural decision as the suppression of the name *R. ocellatus* before a comprehensive taxonomic study of the group had taken place.

Additional references

Costa, W.J.E.M. 1990. Amálise filogenética da família Rivulidae (Cyprinodontiformes, Aplocheiloidei). *Revista Brasileira de Biologia*, **50**(1): 65–82.

Costa, W.J.E.M. 1991. Redescriçao do gênero *Rivulus* .... *Revista Brasileira de Biologia*, **51**(2): 327–333.

Costa, W.J.E.M. 1991. Description of two new species of the genus *Rivulus* (Cyprinodontiformes, Rivulidae) from eastern South American coastal plains. *Revue Suisse de Zoologie*, **98**(3): 581–587.

Costa, W.J.E.M. & Brasil, G.C. 1991. Description of a new species of the genus *Rivulus* (Cyprinodontiformes, Rivulidae) from the coastal plains of Eastern Brazil. *Ichthyol. Explor. Freshwaters*, **1**(4): 379–383.

(2) Kenneth J. Lazara
Department of Mathematics and Science, United States Merchant Marine Academy, Kings Point, N. Y. 11024, U.S.A.

Michael L. Smith
American Museum of Natural History, Central Park West at 79th Street, New York, N.Y. 11024, U.S.A.

In our application (BZN **47**: 191–194) we proposed that the specific name of *Rivulus marmoratus* Poey, 1880 be conserved for the reasons stated (paras. 3 and 7) and we asked the Commission to suppress and place on the Official Index the senior synonym *R. ocellatus* Hensel, 1868.

Subsequent to our application, Wilson Costa, in a comment (above), a copy of which was provided to us, has expressed concern that if the Brazilian populations of *R. marmoratus* were to be recognized as a separate species or as a subspecies the name *ocellatus*, which would normally have been available for these populations, would have been officially rejected and by implication a new name would have to be found.

While our research on all known populations of *R. marmoratus* indicates that there are no more morphological or meristic differences between populations than there are within any one population, we recognize that the diversity of opinion which has emerged should be accommodated. In view of this we now propose to revise our application to request that the name *Rivulus marmoratus* Poey, 1880 be given precedence over *R. ocellatus* Hensel, 1868, rather than that *ocellatus* be suppressed, so that the latter can continue to be of use, if required, as a specific or subspecific name.

A specimen marked as the type of *Rivulus ocellatus* is present in the Humboldt Museum in Berlin (no. ZMB 7448; para. 4 of the application). However, an additional matter which should be addressed is the loss of Poey's types of

R. marmoratus. The association of the specific name of *marmoratus* with a type specimen from Cuba would be desirable should populations of *marmoratus* elsewhere be proposed for specific or subspecific status. Rivas (1945) asserted that the types of *marmoratus* were discovered in the United States National Museum. His arguments that two specimens labeled *R. cylindraceus* were, indeed, Poey's missing types of *marmoratus* were highly conjectural (para. 1 of the application). To our knowledge no other specimen has been recognized or designated as a type of *marmoratus* and, to minimize the possibility of any future nomenclatural problems, we hereby propose as the neotype of *R. marmoratus* the same specimen that Rivas designated as the lectotype, namely USNM 37429.

The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers:
   (a) to set aside all previous fixations of type specimen for the nominal species *Rivulus marmoratus* Poey, 1880 and to designate as neotype specimen no. 37429 in the United States National Museum;
   (b) to rule that the specific name *marmoratus* Poey, 1880, as published in the binomen *Rivulus marmoratus*, is to be given precedence over the name *ocellatus* Hensel, 1868, as published in the binomen *Rivulus ocellatus*, whenever the two names are considered to be synonyms;

(2) to place on the Official List of Specific Names in Zoology the following names:
   (a) *marmoratus* Poey, 1880, as published in the binomen *Rivulus marmoratus* and as defined by the neotype designated in (1)(a) above, with the endorsement that it is to be given precedence over the name *ocellatus* Hensel, 1868, as published in the binomen *Rivulus ocellatus*, whenever the two names are considered to be synonyms;
   (b) *ocellatus* Hensel, 1868, as published in the binomen *Rivulus ocellatus*, with the endorsement that it is not to be given priority over the name *marmoratus* Poey, 1880, as published in the binomen *Rivulus marmoratus*, whenever the two names are considered to be synonyms.

Comments on the proposed designation of a neotype for *Coelophysis bauri* (Cope, 1887) (Reptilia, Saurischia)
(Case 2840; see BZN **49**: 276–279; **50**: 147–151, 236–239, 291–294)

(1) S.P. Welles
Museum of Paleontology, University of California, Berkeley, California 94720, U.S.A.

I oppose the application by Colbert et al., since it is unnecessary and contrary to Article 75 of the Code because there has been no loss or destruction of the original type material. We would have complete nomenclatural chaos if the type, even though a poor specimen, could be replaced whenever a better specimen was discovered and designated a neotype. To carry this to absurdity: if an even better specimen were found later, could it be made a neoneotype? I strongly object to replacing an existing type specimen. Even though the type be indeterminate (a subjective conclusion) the name must remain attached to that specimen.

(2) George Olshevsky

Post Office Box 16294, San Diego, California 92176–6924, U.S.A.

I would like to express my strong support for Hunt & Lucas (1991), who recognized the likely indeterminate nature of the type specimen of *Coelophysis bauri* and the probable unsuitability of that name for the numerous well-preserved specimens discovered at the Ghost Ranch quarry. In coining the name *Rioarribasaurus colberti* Hunt & Lucas properly exercised their freedom, as professional naturalists, to differ with Colbert about the identity of the Ghost Ranch material. It must be emphasized that the debate that Hunt & Lucas opened can be resolved only by restudy and comparison of the type material of *Coelophysis bauri* and of *Rioarribasaurus colberti*, and not by arbitrary exercise of plenary powers by the Commission. If the Commission declares the holotype of *R. colberti* to be the neotype of *C. bauri*, this will sink *R. colberti* as a junior objective synonym and squelch further debate by fiat rather than by science. The procedure already exists for doing away with the name *R. colberti* without involving the Commission, in the event that a convincing argument is presented for regarding it as a junior subjective synonym of *C. bauri*. But should their proposal become an official ruling, the paleontologists who drafted Case 2840 will have sidestepped their part of the necessary debate and revisory work.

Designation of neotypes by the Commission should be a last resort, as when original type specimens cannot be located. Despite the confusion regarding the status of *Coelophysis bauri*, a lectotype was validly designated by Colbert and still exists, together with associated material. There is therefore no true or pressing reason to designate a neotype. In my opinion, all other approaches have not yet been exhausted in the case of *C. bauri*. Diligent reexamination of the original material could establish it to be a valid species of small theropod closely related to the Ghost Ranch species *R. colberti*. Indeed, the new combination *Coelophysis colberti* could eventually prove to be the most apt name for the latter, retaining the well known generic name *Coelophysis* but reflecting a species-level distinction from Cope's original material.

In coining the name *Rioarribasaurus colberti* Hunt & Lucas (1991) did not 'suppress' the generic name *Coelophysis* or the specific name *bauri*, which would have been nomenclaturally improper; they simply gave a new name to material which they considered could not be referred to Cope's taxon. Paleontologists who believe that *Coelophysis bauri* and *Rioarribasaurus colberti* are synonyms are entirely free to apply the former name to the Ghost Ranch specimens and to discard *R. colberti* as a junior subjective synonym, without involving the Commission. However, those who disagree with this position now have an available name for the Ghost Ranch material. Approval by the Commission of the application by Colbert et al. would leave Cope's material nameless, if it were considered distinct. It could not then be discussed without inventing a third name, which is quite inconsistent with the general desire to avoid the proliferation of unnecessary names.

I may add that there is no compelling reason to assume that only one theropod species is represented at Ghost Ranch, despite the widespread but actually unjustified support that this notion enjoys among the paleontological community.

Should further research disclose the existence of multiple taxa the Commission, in suppressing *Rioarribasaurus colberti*, might find itself in the position of having suppressed the name of a perfectly valid species.

The name *Coelophysis bauri* should remain attached to the material described by Cope and von Huene, and more recently by Padian (1986). In my opinion designating the holotype of *Rioarribasaurus colberti* as the neotype of *C. bauri* would constitute an infringement of the basic freedom of naturalists to name the objects that they study.

(3) Elizabeth L. Nicholls

Royal Tyrrell Museum of Palaeontology, P.O. Box 7500, Drumheller, Alberta, Canada T0J 0Y0

The name *Coelophysis bauri* is well established in both professional and popular literature. The excellent material from Ghost Ranch makes it one of the best known dinosaurs. I request that the name *Rioarribasaurus colberti* Hunt & Lucas, 1991 be rejected; our taxonomic literature is already cluttered with an excess of names. Creating a new name for a well known species only serves to complicate our work. If the type material is non-diagnostic, then I consider the cause of paleontology and taxonomy would be better served by designating a neotype than by having an unnecessary name.

(4) Louis L. Jacobs

Department of Geological Sciences, Southern Methodist University, Dallas, Texas 75275–0395, U.S.A.

I wish to express my opinion that the name *Coelophysis bauri* should be retained for the Ghost Ranch specimens. As one who has done research including *Coelophysis*, I can state that I have had no problems of confusion that require the muddying of the waters with a new name for *Coelophysis bauri*.

(5) Donald F. Glut

2805 N. Keystone Street, Burbank, California 91504, U.S.A.

I accept the argument of Hunt & Lucas (1991) that Cope's taxon *Coelurus bauri* (= *Coelophysis bauri*) was based on indeterminate material, and that the theropod collected in such abundance at Ghost Ranch is therefore not unequivocally associated with the name by which it is known in both the paleontological literature and popular publications. However, I agree with Colbert et al., and with others who have supported their application, that in this particular case strict adherence to the Code should be waived in the interest of stability. I support the proposed designation of the complete skeleton AMNH 7224 as the neotype of *Coelophysis bauri*.

(6) Armand de Ricqlès
Laboratoire d'Anatomie Comparée, Université de Paris VII, 2 Place Jussieu, 75251 Paris, France

En tant que chercheur et enseignant dans le domaine des tétrapodes fossiles et travaillant personellement sur la paléohistologie des Dinosauriens, je me range pleinement à l'opinion présentée par Colbert et al.

Dans le but pratique de conserver l'usage très répandu et ne prètant pas à confusion du nom du genre *Coelophysis*, je suis d'avis que la Commission use de ses pleins pouvoirs selon la procédure suggérée (BZN **49**: 278, para. 11), ou bien qu'elle use de toute autre procédure qui pourrait lui apparaitre formellement plus opportune mais concourant à la mème fin.

(7) P.K. Tubbs
Executive Secretary, The International Commission on Zoological Nomenclature, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.

The Commission Secretariat has received an offprint of a paper by G.S. Paul (1993) which relates to this case.

Paul discusses the anatomy of the Whitaker Quarry (Ghost Ranch) specimens, and considers (p. 397, last para.) that only one species is represented. He finds no genus-level distinction between the Ghost Ranch skeletons and specimens of *Syntarsus rhodesiensis*, which is the type species of *Syntarsus* Raath, 1969. Paul notes (p. 400, para. 5) that 'referring the Whitaker specimens to *Coelophysis bauri* (Cope, 1889) has the advantage of retaining a popular name' but adds that because of the fragmentary nature of the original material the name *C. bauri* 'is a nomen dubium'. He continues 'the attempt by Colbert et al. (1992) to designate a diagnostic neotype for *C. bauri* (the type of *R. colberti*) effectively accepts the indeterminate nature of the lectotype, and appears to be contrary to Art. 75(a) of the Code, which states that a neotype can be designated only ... when no type material is believed to exist'. While true, this last statement by Paul (see also the above comment (1) by S.P. Welles) overlooks the fact that Colbert et al. have, in accordance with Recommendation 75E, sought the use of the Commission's plenary powers for the very reason that a neotype designation would otherwise be invalid.

Paul continues (p. 400, para. 7) 'it is here suggested that *Rioarribasaurus* [Hunt & Lucas, 1991] be made a junior synonym of *Syntarsus*. The latter name has priority, and is based on diagnostic type material ... In this case, *Syntarsus* would include the species *S. colberti*, *S. rhodesiensis* and *S. kayentakatae*. Alternatively, if the validity of *Coelophysis* is accepted then it includes *C. bauri*, *C. rhodesiensis* and *C. kayentakatae*'. In his paper Paul adopts the name *Syntarsus colberti* for the Ghost Ranch species, but he retains the name COELOPHYSIDAE Paul, 1988 for the family containing *Syntarsus* because 'the type material cannot be demonstrated to not belong to the higher taxon'.

Additional reference

Paul, G.S. 1993. Are *Syntarsus* and the Whitaker quarry theropod the same genus? Pp. 397–402 *in* Lucas, S.G. & Morales, M. (Eds.), *The Nonmarine Triassic. New Mexico Museum of Natural History & Science Bulletin*, no. 3.

Comment on the proposed conservation of *Emys* Duméril, 1806 (Reptilia, Testudines)
(Case 2873; see BZN **50**: 224–227)

Hobart M. Smith

Department of EPO Biology, University of Colorado, Boulder, Colorado 80309–0334, U.S.A.

Supportive evidence for the conservation of *Emys* is overwhelming. Entries for that generic name (in its present sense, e.g. excluding *Emydoidea* Gray, 1870, formerly regarded as a junior synonym of *Emys*) in the ten most recent subannual issues of the Reptilia section of the *Zoological Record* list 198 different publications, and there must be many more in the relevant period which mentioned the name. Furthermore, *Emys* is the type genus of the long-recognized family name EMYDIDAE Gray, 1825. Clearly, *Emydes* Brongniart, 1805, which has never been accepted as valid, should not replace Duméril's generic name.

Comment on the proposed conservation of the subspecific name of *Catharacta antarctica lonnbergi* Mathews, 1912 (currently *Catharacta skua lonnbergi*; Aves, Charadriiformes)
(Case 2816; see BZN **50**: 48–51, 294–295)

J.-F. Voisin & C. Voisin

Laboratoire de Zoologie: Mammifères et Oiseaux, Muséum National d'Histoire Naturelle, 55 rue de Buffon, 75005 Paris, France

W.J. Bock

Department of Biological Sciences, Columbia University in the City of New York, N.Y. 10027, U.S.A.

M. Théry

C.N.R.S., U.R.A. 1183, Laboratoire d'Ecologie Générale, Muséum National d'Histoire Naturelle, 4 avenue du Petit Château, 91800 Brunoy, Paris, France

In their comment on our application to conserve the name of *Catharacta skua lonnbergi* (Mathews, 1912), Bourne and his co-authors expressed the opinion (BZN **50**: 295) that the identity of the type specimen of *Stercorarius antarcticus madagascariensis* Bonaparte, 1856 is still rather doubtful because 'a tarsus length as long as 85 mm ... is only found in [the New Zealand area], whilst a wing length near 370 mm is only to be found in [the Falklands area]'. Unfortunately, this argument cannot be used as both the longest primaries of the type are broken (para. 3 of the application) and an estimated 20 mm, at least, is missing. This brings the wing length of this bird to at least 390 mm, and well within the range of males of *C. s. lonnbergi* as well as that of several other populations (Furness, 1987). The same is true for its culmen length (56.5 mm), and only its tarsus length shows a discriminating value. The most logical solution is to consider this bird as a small specimen of *C. s. lonnbergi*,

and since it is agreed that the name *madagascariensis* should be rejected there is no need to examine the specimen's DNA (cf. Bourne et al.).

As noted in our application (para. 4), the taxonomy of the skuas is most difficult and has taken considerable effort to clarify. The use of the name *madagascariensis* instead of the well known *lonnbergi* would add confusion to this difficult taxonomic situation, and for this reason we proposed the suppression of the earlier name. Even if we agree with the proposal of Bourne et al. to place the name *hamiltoni* Hagen, 1952 (published as a subspecies of *Catharacta skua*) on the Official List we think that the taxonomic status of this nominal subspecies deserves a special study; there is however no nomenclatural problem with this recent name.

OPINION 1752

Zanclea costata Gegenbaur, 1856 (Cnidaria, Hydrozoa): generic and specific names conserved

Ruling

(1) Under the plenary powers the following names are hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:

(a) the generic names:

(i) *Acrochordium* Meyen, 1834;

(ii) *Mnestra* Krohn, 1853;

(b) the specific name *parasites* Krohn, 1853, as published in the binomen *Mnestra parasites*.

(2) The name *Zanclea* Gegenbaur, 1856 (gender: feminine), type species by monotypy *Zanclea costata* Gegenbaur, 1856, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *costata* Gegenbaur, 1856, as published in the binomen *Zanclea costata* (specific name of the type species of *Zanclea* Gegenbaur, 1856), is hereby placed on the Official List of Specific Names in Zoology.

(4) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:

(a) *Acrochordium* Meyen, 1834 as suppressed in (1)(a)(i) above;

(b) *Mnestra* Krohn, 1853 as suppressed in (1)(a)(ii) above.

(5) The name *parasites* Krohn, 1853, as published in the binomen *Mnestra parasites* and as suppressed in (1)(b) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 2806

An application for the conservation of the generic and specific names of *Zanclea costata* Gegenbaur, 1856 was received from Dr Dale R. Calder (*Royal Ontario Museum* and *University of Toronto, Toronto, Ontario, Canada*) on 18 January 1991. After correspondence the case was published in BZN **49**: 184–186 (September 1992). Notice of the case was sent to appropriate journals.

A comment in support from Dr B.P. Haldar (*Zoological Survey of India, Calcutta, India*) was published in BZN **50**: 140 (June 1993).

Decision of the Commission

On 1 September 1993 the members of the Commission were invited to vote on the proposals published in BZN **49**: 185. At the close of the voting period on 1 December 1993 the votes were as follows:

Affirmative votes — 24: Bayer, Bock, Cocks, Cogger, Corliss, Dupuis, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys, Trjapitzin, Willink

Negative votes — 4: Bouchet, Hahn, Lehtinen and Thompson.

No vote was received from Uéno.

Hahn commented that since the synonymy of *Acrochordium* Meyen, 1834 and *Mnestra* Krohn, 1853 with *Zanclea* appeared to be uncertain he would have preferred to give *Zanclea* precedence over the other two names rather than suppress them. Lehtinen commented that as long as the status of all the specific names was unclear suppression of any of the generic names appeared premature.

Original references

The following are the original references to the names placed on Official Lists and Official Indexes by the ruling given in the present Opinion:

Acrochordium Meyen, 1834, *Novorum Actorum Academiae Caesareae Leopoldino-Carolinae Naturae Curiosorum*, **16**(Supplement 1): 165.

costata, *Zanclea*, Gegenbaur, 1856, *Zeitschrift für Wissenschaftliche Zoologie*, **8**(2): 229.

Mnestra Krohn, 1853, *Archiv für Naturgeschichte*, **19**(1): 281.

parasites, *Mnestra*, Krohn, 1853, *Archiv für Naturgeschichte*, **19**(1): 281.

Zanclea Gegenbaur, 1856, *Zeitschrift für Wissenschaftliche Zoologie*, **8**(2): 229.

OPINION 1753

Gebia major capensis Krauss, 1843 (currently *Upogebia capensis*; Crustacea, Decapoda): neotype replaced, so conserving the usage of *G. capensis* and also that of *G. africana* Ortmann, 1894 (currently *Upogebia africana*)

Ruling

(1) Under the plenary powers all previous fixations of type specimen for the nominal subspecies *Gebia major capensis* Krauss, 1843 are hereby set aside and the female specimen from Saldanha Bay, South Africa, no. 14895 in the South African Museum, Cape Town, is designated as the neotype.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *capensis* Krauss, 1843, as published in the trinomen *Gebia major* var. *capensis* and as defined by the neotype designated in (1) above;

(b) *africana* Ortmann, 1894, as published in the binomen *Gebia africana*.

History of Case 2827

An application for the designation of a replacement neotype for *Gebia major capensis* Krauss, 1843 was received from Drs N. Ngoc-Ho (*Muséum National d'Histoire Naturelle, Paris, France*) and Gary C.B. Poore (*Museum of Victoria, Melbourne, Victoria, Australia*) on 17 April 1991. After correspondence the case was published in BZN **49**: 187–190 (September 1992). Notice of the case was sent to appropriate journals.

Comments in support from Profs C.L. Griffiths (*Marine Biology Research Institute, University of Cape Town, Rondebosch, South Africa*) and W. Emmerson (*University of Transkei, Umtata, Transkei, Southern Africa*), together with those of four members of the Nomenclature Committee of The Crustacean Society (Drs K. Baba, *Kumamoto University, Kumamoto, Japan*; Thomas E. Bowman, *Smithsonian Institution, Washington, D.C., U.S.A.*; Joel W. Martin, *Natural History Museum of Los Angeles County, Los Angeles, California, U.S.A.*; and Austin B. Williams, *National Marine Fisheries Service Systematics Laboratory, Smithsonian Institution, Washington, D.C., U.S.A.*), were published in BZN **50**: 142–144 (June 1993).

Decision of the Commission

On 1 September 1993 the members of the Commission were invited to vote on the proposals published in BZN **49**: 188–189. At the close of the voting period on 1 December 1993 the votes were as follows:

Affirmative votes — 28: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — none.

No vote was received from Uéno.

Original references

The following are the original references to the names placed on an Official List by the ruling given in the present Opinion:

africana, *Gebia*, Ortmann, 1894, *Denkschriften der Medicinisch-Naturwissenschaftlichen Gesellschaft zu Jena*, **8**: 22.

capensis, *Gebia major*, Krauss, 1843, *Die Südafrikanischen Crustaceen. Eine Zusammenstellung aller bekannten Malacostraca* ..., p. 54.

OPINION 1754

Histoire abrégée des insectes qui se trouvent aux environs de Paris (Geoffroy, 1762): some generic names conserved (Crustacea, Insecta)

Ruling

A. *Histoire abrégée des insectes* ... (Geoffroy, 1762)

(1) Under the plenary powers it is hereby ruled that, notwithstanding the use of polynominal specific names in the work by E.L. Geoffroy (1762) entitled *Histoire abrégée des insectes qui se trouvent aux environs de Paris*, the generic names published in that work are deemed to be available. The ruling is confined exclusively to the availability of generic names. Specific names and nomenclatural acts are not to be taken from the work.

(2) This work is hereby deleted from the Official Index of Rejected and Invalid Works in Zoological Nomenclature and placed on the Official List of Works Approved as Available for Zoological Nomenclature with an endorsement to reflect the ruling in A(1) above, namely that the generic names published in this work are deemed to be available.

(3) Such editorial changes in the Official Lists and Indexes as are necessary from the rulings in A(1) and (2) above and in related previous Opinions are hereby authorised.

B. Crustacea

(1) It is hereby ruled that the authorship attribution of *Binoculus* 'Müller, 1776' on the Official Index of Rejected and Invalid Generic Names in Zoology is corrected to Geoffroy, 1762.

(2) The entry recorded as *Binoculus* Geoffroy, 1764 is hereby deleted from the Official Index of Rejected and Invalid Generic Names in Zoology.

(3) The name *Asellus* Geoffroy, 1762 (gender: masculine), type species by subsequent monotypy (Fourcroy, 1785) *Oniscus aquaticus* Linnaeus, 1758, is hereby placed on the Official List of Generic Names in Zoology.

(4) The name *aquaticus* Linnaeus, 1758, as published in the binomen *Oniscus aquaticus* (specific name of the type species of *Asellus* Geoffroy, 1762), is hereby placed on the Official List of Specific Names in Zoology.

C. Insecta, Thysanura

(1) The name *Forbicina* Geoffroy, 1762 is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology (a junior objective synonym of *Lepisma* Linnaeus, 1758).

D. Insecta, Orthoptera

(1) Under the plenary powers:

(a) the generic name *Mantes* Geoffroy, 1762 is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(b) the name *Mantis* Linnaeus, 1758 is hereby ruled to be an available genus-group name;

(c) the type species of *Mantis* Linnaeus, 1758 is hereby ruled to be *Gryllus religiosus* Linnaeus, 1758, by subsequent designation by Latreille (1810).

(2) The entries on the Official Lists relating to *Mantis* Linnaeus, 1767 and *Gryllus religiosus* Linnaeus, 1758 are hereby amended to record the rulings in D(1)(b) and (c) above, namely that the authorship of *Mantis* is Linnaeus, 1758.

(3) The name *Mantes* Geoffroy, 1762, as suppressed in D(1)(a) above, is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology.

E. Insecta, Homoptera

(1) Under the plenary powers the generic name *Tetigonia* Geoffroy, 1762 is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The entry recorded as *Tetigonia* Geoffroy, 1762 on the Official Index of Rejected and Invalid Generic Names in Zoology is hereby amended in accordance with the ruling in E(1) above.

(3) The entries recorded as *Tetigonia* Fourcroy, 1785 and *Tetigonia* Blanchard, 1852 are hereby deleted from the Official Index of Rejected and Invalid Generic Names in Zoology.

F. Insecta, Heteroptera

(1) The name *Hepa* Geoffroy, 1762 is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology (a junior objective synonym of *Nepa* Linnaeus, 1758).

G. Insecta, Neuroptera

(1) Under the plenary powers the generic name *Formicaleo* Geoffroy, 1762 is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *Formicaleo* Geoffroy, 1762, as suppressed in G(1) above, is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology.

H. Insecta, Hymenoptera

(1) It is hereby confirmed that all uses of the name *Crabro* prior to that by Fabricius (1775) are suppressed for the purposes of both the Principle of Priority and the Principle of Homonymy.

(2) The following names, conserved by the ruling in A(1) above, are hereby placed on the Official List of Generic Names in Zoology:

(a) *Diplolepis* Geoffroy, 1762 (gender: feminine), type species by subsequent designation by Karsch (1880) *Cynips rosae* Linnaeus, 1758;

(b) *Eulophus* Geoffroy, 1762 (gender: masculine), type species by subsequent monotypy (Olivier, 1792) *Ichneumon ramicornis* Fabricius, 1781;

(c) *Urocerus* Geoffroy, 1762 (gender: masculine), type species by subsequent monotypy (Fourcroy, 1785) *Ichneumon gigas* Linnaeus, 1758.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *gigas* Linnaeus, 1758, as published in the binomen *Ichneumon gigas* (specific name of the type species of *Urocerus* Geoffroy, 1762);

(b) *ramicornis* Fabricius, 1781, as published in the binomen *Ichneumon ramicornis* (specific name of the type species of *Eulophus* Geoffroy, 1762);

(c) *rosae* Linnaeus, 1758, as published in the binomen *Cynips rosae* (specific name of the type species of *Diplolepis* Geoffroy, 1762).

(4) The entry for *Crabro* Geoffroy, 1762 on the Official Index of Rejected and Invalid Generic Names in Zoology is hereby amended in accordance with the ruling in H(1) above.

J. Insecta, Lepidoptera

(1) Under the plenary powers all fixations of type species for the nominal genus *Pterophorus* Geoffroy, 1762 prior to the designation by Curtis (1827) of *Phalaena pentadactyla* Linnaeus, 1758 are hereby set aside.

(2) The entry for *Pterophorus* Schäffer, 1766 on the Official List of Generic Names in Zoology is hereby amended to record authorship from Geoffroy, 1762, as ruled in A(1) above, and the type species designation by Curtis (1827), as ruled in J(1) above.

(3) The entry for *pentadactyla*, *Phalaena*, Linnaeus, 1758 on the Official List of Specific Names in Zoology is hereby amended to record it as the type species of *Pterophorus* Geoffroy, 1762.

(4) The entry for *Tinaea* Geoffroy, 1762 on the Official Index of Rejected and Invalid Generic Names in Zoology is hereby amended to record the name as a junior objective synonym of *Tinea* Linnaeus, 1758.

K. Insecta, Coleoptera

(1) Under the plenary powers all fixations of type species for the following nominal genera are set aside:

(a) for *Anthrenus* Geoffroy, 1762 — prior to the designation by Mroczkowski (1968) of *Dermestes scrophulariae* Linnaeus, 1758;

(b) for *Prionus* Geoffroy, 1762 — all previous fixations of type species, and *Cerambyx coriarius* Linnaeus, 1758 is hereby designated as the type species;

(c) for *Stenocorus* Geoffroy, 1762 — all previous fixations of type species, and *Leptura meridiana* Linnaeus, 1758 is hereby designated as the type species.

(2) Under the plenary powers the following generic names are hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:

(a) *Cistela* Geoffroy, 1762;

(b) *Pistella* Müller, 1764;

(c) *Rhinomacer* Geoffroy, 1762.

(3) Under the plenary powers the following generic names are hereby suppressed for the purposes of both the Principle of Priority and the Principle of Homonymy:

(a) *Byrrhus* Geoffroy, 1762 and all other uses of the name *Byrrhus* prior to *Byrrhus* Linnaeus, 1767;

(b) *Cucujus* Geoffroy, 1762 and all other uses of the name *Cucujus* prior to *Cucujus* Fabricius, 1775;

(c) *Melolontha* Geoffroy, 1762 and all other uses of the name *Melolontha* prior to *Melolontha* Fabricius, 1775;

(d) *Peltis* Geoffroy, 1762 and all other uses of the name *Peltis* prior to *Peltis* Kugelann, 1792;

(e) *Tritoma* Geoffroy, 1762 and all other uses of the name *Tritoma* prior to *Tritoma* Fabricius, 1775.

(4) Under the plenary powers the specific name *cylindricus* Müller, 1776, as published in the binomen *Ptilinus cylindricus*, is hereby suppressed for the purposes of both the Principle of Priority and the Principle of Homonymy.

(5) The following names, conserved under the plenary powers in A(1) and K(3) above, are hereby placed on the Official List of Generic Names in Zoology:

(a) *Altica* Geoffroy, 1762 (gender: feminine), type species by subsequent designation by Latreille (1810) *Chrysomela oleracea* Linnaeus, 1758;

(b) *Anthrenus* Geoffroy, 1762 (gender: masculine), type species by subsequent designation by Mroczkowski (1968) *Dermestes scrophulariae* Linnaeus, 1758, as ruled in K(1)(a) above;

(c) *Anthribus* Geoffroy, 1762 (gender: masculine), type species by subsequent designation by Jordan (1931) *Anthribus fasciatus* Forster, 1770;

(d) *Bostrichus* Geoffroy, 1762 (gender: masculine), type species by subsequent designation by Latreille (1810) *Dermestes capucinus* Linnaeus, 1758;

(e) *Byrrhus* Linnaeus, 1767 (gender: masculine), type species by subsequent designation by Latreille (1810) *Dermestes pilula* Linnaeus, 1758;

(f) *Cerocoma* Geoffroy, 1762 (gender: feminine), type species by subsequent monotypy (Fabricius, 1775) *Meloe schaefferi* Linnaeus, 1758;

(g) *Copris* Geoffroy, 1762 (gender: masculine), type species by subsequent designation by Latreille (1810) *Scarabaeus lunaris* Linnaeus, 1758;

(h) *Crioceris* Geoffroy, 1762 (emendation of entry on Official List for *Crioceris* Müller, 1764);

(i) *Cryptocephalus* Geoffroy, 1762 (gender: masculine), type species by subsequent designation by Latreille (1810) *Chrysomela sericea* Linnaeus, 1758;

(j) *Cucujus* Fabricius, 1775 (gender: masculine), type species by monotypy *Cucujus depressus* Fabricius, 1775 (a junior subjective synonym of *Meloe cinnabarina* Scopoli, 1763);

(k) *Diaperis* Geoffroy, 1762 (gender: feminine), type species by subsequent monotypy (Müller, 1776) *Chrysomela boleti* Linnaeus, 1758;

(l) *Galeruca* Geoffroy, 1762 (gender: feminine), type species by subsequent designation by Latreille (1810) *Chrysomela tanaceti* Linnaeus, 1758;

(m) *Gyrinus* Geoffroy, 1762 (gender: masculine), type species by subsequent designation by Latreille (1810) *Dytiscus natator* Linnaeus, 1758;

(n) *Hydrophilus* Geoffroy, 1762 (gender: masculine), type species by subsequent designation by Latreille (1810) *Dytiscus piceus* Linnaeus, 1758;

(o) *Melolontha* Fabricius, 1775 (gender: feminine), type species by absolute tautonymy *Scarabaeus melolontha* Linnaeus, 1758;

(p) *Notoxus* Geoffroy, 1762 (gender: masculine), type species by subsequent designation by Latreille (1810) *Attelabus monoceros* Linnaeus, 1761;

(q) *Omalisus* Geoffroy, 1762 (gender: masculine), type species by subsequent monotypy (Fourcroy, 1785) *Omalisus fontisbellaquaei* Geoffroy in Fourcroy, 1785;

(r) *Peltis* Kugelann, 1792 (gender: feminine), type species by subsequent designation by Hope (1840) *Silpha grossa* Linnaeus, 1758;

(s) *Platycerus* Geoffroy, 1762 (gender: masculine), type species by subsequent designation by Latreille (1810) *Scarabaeus caraboides* Linnaeus, 1758;

(t) *Prionus* Geoffroy, 1762 (gender: masculine), type species by designation under the plenary powers in K(1)(b) above *Cerambyx coriarius* Linnaeus, 1758;

(u) *Ptilinus* Geoffroy, 1762 (gender: masculine), type species by subsequent monotypy (Müller, 1776) *Ptilinus cylindricus* Müller, 1776 (a suppressed senior subjective synonym of *Ptilinus fuscus* Geoffroy in Fourcroy, 1785) (see ruling in K(4) above);

(v) *Pyrochroa* Geoffroy, 1762 (gender: feminine), type species by subsequent designation by Westwood ([1838]) *Cantharis coccinea* Linnaeus, 1761;

(w) *Stenocorus* Geoffroy, 1762 (gender: masculine), type species by designation under the plenary powers in K(1)(c) above *Leptura meridiana* Linnaeus, 1758;

(x) *Tritoma* Fabricius, 1775 (gender: feminine), type species by subsequent designation by Latreille (1810) *Tritoma bipustulata* Fabricius, 1775.

(6) The following names, suppressed in K(2) and K(3) above, are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:

(a) *Byrrhus* Geoffroy, 1762 and all other uses of the name *Byrrhus* prior to *Byrrhus* Linnaeus, 1767;

(b) *Cistela* Geoffroy, 1762;

(c) *Cucujus* Geoffroy, 1762 and all other uses of the name *Cucujus* prior to *Cucujus* Fabricius, 1775;

(d) *Melolontha* Geoffroy, 1762 and all other uses of the name *Melolontha* prior to *Melolontha* Fabricius, 1775;

(e) *Peltis* Geoffroy, 1762 and all other uses of the name *Peltis* prior to *Peltis* Kugelann, 1792;

(f) *Pistella* Müller, 1764;

(g) *Rhinomacer* Geoffroy, 1762;

(h) *Tritoma* Geoffroy, 1762 and all other uses of the name *Tritoma* prior to *Tritoma* Fabricius, 1775.

(7) The entry on the Official Index of Rejected and Invalid Generic Names in Zoology for the name *Dyticus* Müller, 1776 is hereby amended to read *Dyticus* Geoffroy, 1762.

(8) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *bipustulata* Fabricius, 1775, as published in the binomen *Tritoma bipustulata* (specific name of the type species of *Tritoma* Fabricius, 1775);

(b) *boleti* Linnaeus, 1758, as published in the binomen *Chrysomela boleti* (specific name of the type species of *Diaperis* Geoffroy, 1762);

(c) *capucinus* Linnaeus, 1758, as published in the binomen *Dermestes capucinus* (specific name of the type species of *Bostrichus* Geoffroy, 1762);

(d) *caraboides* Linnaeus, 1758, as published in the binomen *Scarabaeus caraboides* (specific name of the type species of *Platycerus* Geoffroy, 1762);

(e) *cinnabarina* Scopoli, 1763, as published in the binomen *Meloe cinnabarina* (senior subjective synonym of *Cucujus depressus* Fabricius, 1775, the type species of *Cucujus* Fabricius, 1775);

(f) *coccinea* Linnaeus, 1761, as published in the binomen *Cantharis coccinea* (specific name of the type species of *Pyrochroa* Geoffroy, 1762);

(g) *coriarius* Linnaeus, 1758, as published in the binomen *Cerambyx coriarius* (specific name of the type species of *Prionus* Geoffroy, 1762);

(h) *fasciatus* Forster, 1770, as published in the binomen *Anthribus fasciatus* (specific name of the type species of *Anthribus* Geoffroy, 1762);
(i) *fontisbellaquaei* Geoffroy in Fourcroy, 1785, as published in the binomen *Omalisus fontisbellaquaei* (specific name of the type species of *Omalisus* Geoffroy, 1762);
(j) *fuscus* Geoffroy in Fourcroy, 1785, as published in the binomen *Ptilinus fuscus* (first available subjective synonym of *Ptilinus cylindricus* Müller, 1776, the type species of *Ptilinus* Geoffroy, 1762);
(k) *grossa* Linnaeus, 1758, as published in the binomen *Silpha grossa* (specific name of the type species of *Peltis* Kugelann, 1792);
(l) *lunaris* Linnaeus, 1758, as published in the binomen *Scarabaeus lunaris* (specific name of the type species of *Copris* Geoffroy, 1762);
(m) *melolontha* Linnaeus, 1758, as published in the binomen *Scarabaeus melolontha* (specific name of the type species of *Melolontha* Fabricius, 1775);
(n) *meridiana* Linnaeus, 1758, as published in the binomen *Leptura meridiana* (specific name of the type species of *Stenocorus* Geoffroy, 1762);
(o) *monoceros* Linnaeus, 1761, as published in the binomen *Attelabus monoceros* (specific name of the type species of *Notoxus* Geoffroy, 1762);
(p) *natator* Linnaeus, 1758, as published in the binomen *Dytiscus natator* (specific name of the type species of *Gyrinus* Geoffroy, 1762);
(q) *oleracea* Linnaeus, 1758, as published in the binomen *Chrysomela oleracea* (specific name of the type species of *Altica* Geoffroy, 1762);
(r) *piceus* Linnaeus, 1758, as published in the binomen *Dytiscus piceus* (specific name of the type species of *Hydrophilus* Geoffroy, 1762);
(s) *pilula* Linnaeus, 1758, as published in the binomen *Dermestes pilula* (specific name of the type species of *Byrrhus* Linnaeus, 1767);
(t) *schaefferi* Linnaeus, 1758, as published in the binomen *Meloe schaefferi* (specific name of the type species of *Cerocoma* Geoffroy, 1762);
(u) *scrophulariae* Linnaeus, 1758, as published in the binomen *Dermestes scrophulariae* (specific name of the type species of *Anthrenus* Geoffroy, 1762);
(v) *sericea* Linnaeus, 1758, as published in the binomen *Chrysomela sericea* (specific name of the type species of *Cryptocephalus* Geoffroy, 1762);
(w) *tanaceti* Linnaeus, 1758, as published in the binomen *Chrysomela tanaceti* (specific name of the type species of *Galeruca* Geoffroy, 1762).

(9) The entry on the Official List of Specific Names in Zoology for *Chrysomela asparagi* Linnaeus, 1758 is hereby amended to record the author of *Crioceris* as Geoffroy, 1762.

(10) The name *cylindricus* Müller, 1776, as published in the binomen *Ptilinus cylindricus* and as suppressed in K(4) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 2292

An application for the conservation of 24 of the generic names published by Geoffroy (1762) in his *Histoire abrégée des insectes qui se trouvent aux environs de Paris* was originally received from Dr I.M. Kerzhner (*Zoological Institute, Academy of Sciences, St Petersburg, Russia*) in 1978. The present case was published in BZN **48**: 107–133 (June 1991). Notice of the case was sent to appropriate journals.

The history of the original application was summarized by Kerzhner (BZN **48**: 107–111, paras. A.1-A.9) and by Tubbs (BZN **49**: 223–227; September 1992). Geoffroy (1762) published 59 new generic names with descriptions but he did not use single-word specific names. Of these generic names, 40 were in use in Geoffroy's taxonomic sense and were regularly attributed to his authorship, five were junior synonyms of names in Linnaeus (1758), eight were used in a different taxonomic sense and were attributed to later authors, and the remaining six were replaced in usage by junior synonyms (for details see Kerzhner's para. A.7).

The Commission was first approached about Geoffroy's work more than 50 years ago, when attention was drawn to two facts: that the work was 'non-binominal' because of the treatment of the names of species, and that most of the generic names were currently used as valid. As reported by Kerzhner (BZN **48**: 107) and Tubbs (BZN **49**: 225), specialists then and later urged the conservation of various Geoffroy generic names and this had been approved in 16 cases (in nine Opinions; Kerzhner's para. A.9). In Opinion 228 (1954) the Commission recorded that, while Geoffroy's work was non-binominal, 'some of these [generic] names should, it was agreed, certainly be preserved but the position was not so clear as regards others'. Despite this the ruling recorded that Geoffroy's names were 'not available under the Règles'.

Kerzhner surveyed in detail the 43 new Geoffroy generic names not already conserved and recommended the conservation of 24. He proposed the suppression of 11 (and supported the proposed suppression of three others) in favour of the junior homonyms or synonyms in use, and noted that the five junior synonyms of names of Linnaeus (1758) presented no problem. The names *Acrydium, Bruchus* and *Mylabris* first appeared in Geoffroy (1762). To conserve junior names long treated as valid the suppression of these names, in Geoffroy's taxonomic sense, has been proposed by Drs K.H.L. Key (*Acrydium*; see BZN **45**: 191–193) and L. Borowiec (*Bruchus* and *Mylabris*; see BZN **45**: 194–196), and Kerzhner supported these applications (his paras. D.1, K.5 and K.19). Voting in these instances has been held over pending the determination of their authorship in settlement of the present case.

Kerzhner's application had the support of Dr Curtis W. Sabrosky (*Medford, New Jersey, U.S.A.*), who commented: 'I heartily approve of the application on the Geoffroy names. I was closely involved with this many years ago and found that in Diptera the names had always been used, or virtually always. The dipterists asked to have the Diptera names conserved and thus we have been at a big advantage all these years'. Other comments in support of Dr Kerzhner's application were received from a number of specialists; these comments are recorded in relation to the taxa concerned (pp. 65–66 below).

The procedural complications in voting were of two kinds: (a) the authorship to be attributed to the Geoffroy names for which suppression was proposed by Kerzhner, and (b) points of detail concerning a few individual names.

(a) *Authorship of suppressed names*

In the original application Kerzhner proposed that the 24 names to be conserved should, like those already accepted, be attributed to Geoffroy (1762). In the case of those to be *suppressed*, however, he proposed the citation 'Geoffroy in Müller, 1764';

this was purely to comply with the formal unavailability of those 1762 names not yet conserved. However, all the new generic names, conserved or suppressed, could be attributed to the work where they actually appeared, i.e. Geoffroy (1762), allowing Dr Kerzhner's aims to be achieved but with greater simplicity. As a result of the efforts by him and by others, together with nine previous Opinions, the consequences of Opinion 228 on Geoffroy's generic names were in effect totally superseded, even though by instalments. To reflect this, Tubbs (BZN **49**: 236, para. 9) proposed that generic names in Geoffroy be deemed available (whether to be conserved or suppressed), and this amendment was supported by Kerzhner (BZN **50**: 58). The acceptance of this amendment would not affect the status of any individual name.

(b) *Details concerning individual names*

Points of detail were dealt with individually on the voting papers. Comments that had been received were noted and the points made by Kerzhner in March 1993 (BZN **50**: 58) were incorporated.

B. Crustacea

The conservation of *Asellus* Geoffroy, 1762 was proposed by Kerzhner (BZN **48**: 112), and *Binoculus* 'Geoffroy, 1764' was already suppressed. Holthuis (BZN **49**: 223) proposed that *Asellus* and *Binoculus* should be attributed to Schaeffer (1766) and Schluga (1767) respectively; this was opposed by Tubbs (BZN **49**: 225, para. 5) and by Kerzhner (BZN **50**: 58) as being anomalous and not in accord with any previous attributions of these names. The proposals on BZN **48**: 112 and on BZN **49**: 223 were offered as alternatives for voting.

C. Insecta, Thysanura

The name *Lepisma* Linnaeus, 1758 was placed on the Official List by Opinion 104. Kerzhner (BZN **48**: 112, para. C.1) designated its type species (*L. saccharina* Linnaeus, 1758) to be that also of *Forbicina* Geoffroy, 1762, so rendering the latter a junior objective synonym.

D. Insecta, Orthoptera

A comment from Dr David R. Ragge (*The Natural History Museum, London, U.K.*) supporting the proposals on *Mantis* Linnaeus, 1758 and *Mantes* Geoffroy, 1762 was published in BZN **49**: 71 (March 1992).

G. Insecta, Neuroptera

A comment from Dr S.J. Brooks (*The Natural History Museum, London, U.K.*) in support of the suppression of *Formicaleo* Geoffroy, 1762 was published in BZN **49**: 150 (June 1992).

H. Insecta, Hymenoptera

A comment in support of the conservation of the name *Eulophus* Geoffroy, 1762 from Dr John LaSalle (*International Institute of Entomology, c/o The Natural History*

Museum, London, U.K.) was published in BZN **49**: 71–72 (March 1992). Dr LaSalle pointed out that the date for Olivier's work was 1792 (and not 1791). Dr Kerzhner (BZN **50**: 58) did not accept Dr LaSalle's suggestion concerning the type species of *Eulophus*.

K. Insecta, Coleoptera

A comment from Mr R.D. Pope (*Slinfold, Sussex, U.K.*) supporting the conservation of coleopteran names from Geoffroy (1762) was published in BZN **49**: 71 (March 1992). A further supportive comment from Prof Michael Goodrich (*Eastern Illinois University, Charleston, Illinois, U.S.A.*) also noted: 'Amongst the proposed conservations for coleopteran names are a large number of which the genera are the types for well known families or subfamilies of beetles. It would seem that disruption of all these names would not aid in stability, which is, after all, the ultimate goal of the application'.

Support for the conservation of the names *Copris* and *Platycerus*, both from Geoffroy (1762), and for *Melolontha* Fabricius, 1775, from Dr Frank-Thorsten Krell (*Universität Tübingen, Zoologisches Institut, Tübingen, Germany*) was published in BZN **49**: 149 (June 1992).

Support for the conservation of *Anthribus* Geoffroy, 1762 from Dr Hans Silfverberg (*Universitetets Zoologiska Museum, Helsingfors, Finland*) was published in BZN **49**: 194 (September 1992). However, Dr Kerzhner (BZN **50**: 58) did not accept Dr Silfverberg's (BZN **49**: 224) proposed amendment (Müller, 1776 instead of Kugelann, 1792) for the authorship of the conserved *Peltis*.

Support was received for the conservation of *Tritoma* Fabricius, 1775 by the suppression of all previous uses of the name. Prof Michael Goodrich commented: '*Tritoma*, as used by Fabricius (1775), is a common and widespread genus which has been recognized by entomologists for over 200 years. It is a member of a family upon which I, as an entomologist, do research, including some important current projects. I have papers in preparation on this very genus and I find it of critical importance that the use of the name be conserved, as requested by Kerzhner'. Dr Paul E. Skelley (*University of Florida, Institute of Food and Agricultural Sciences, Gainesville, Florida, U.S.A.*) noted: 'The names T*ritoma* Fabricius, 1775 and *Cyrtotriplax* Crotch, 1873 have been used as alternatives for many years. Even recent catalogs have come to no consensus. I support the proposed conservation of *Tritoma* Fabricius, type species *T. bipustulata* Fabricius, 1775'.

General note

The proposals voted on were those of Kerzhner but incorporated the published amendments supported by him. The application (BZN **48**: 107–133) contains the detailed information concerning each name, and sections B-K in this Opinion correspond to those in the application.

It should be noted that although Geoffroy's (1762) work has been transferred from the Official Index to the Official List by the ruling in this Opinion, the ruling applies exclusively to the availability of generic names published in the work, i.e. it does not extend to specific names, the fixation of type species, or the inclusion of nominal species within genera. The type species designations adopted in the present Opinion are those set out by Kerzhner in his application.

Decision of the Commission

On 1 September 1993 the members of the Commission were invited to vote. At the close of the voting period on 1 December 1993 the votes were as recorded in each instance.

A. Availability of generic names in *Histoire abrégée des insectes* ... (Geoffroy, 1762)

Proposals (1)-(3) on BZN **49**: 226

Affirmative votes — 25: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — 2: Heppell and Holthuis.

No vote was received from Uéno.

Ride was on leave of absence.

Heppell commented that he voted against the transfer of Geoffroy's (1762) work from the Official Index to the Official List and that he would have preferred to use the plenary powers to make generic names available individually. Having voted against these proposals, Holthuis abstained on the votes which followed.

B. Crustacea

Proposals on BZN **48**: 112. Affirmative votes — 26: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell (part), Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Proposals on BZN **49**: 223. Affirmative votes — none.

Heppell commented that he would have preferred to correct the entry on the Official Index for *Binoculus* 'Müller, 1776' to *Binoculus* 'Geoffroy in Müller, 1764' (paras. B.3 (2)(b) and 5(a) on BZN **48**: 112), in accord with his vote against proposal (1) on BZN **49**: 226.

C–K. Insecta (C. Thysanura; D. Orthoptera; E. Homoptera; F. Heteroptera; G. Neuroptera; H. Hymenoptera; J. Lepidoptera; K. Coleoptera)

Sections C-K were voted upon separately. Exceptions to affirmative votes are recorded below.

Affirmative votes — 26: Bayer, Bock, Bouchet, Cocks, Cogger (part), Corliss, Dupuis, Hahn, Halvorsen, Heppell (part), Kabata, Kraus, Lehtinen (part), Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson (part), Trjapitzin, Willink.

Cogger and Lehtinen voted against, and Heppell abstained on, the proposals on sections C and F. Explaining their votes, Heppell and Lehtinen commented that the names *Forbicina* and *Hepa*, both of Geoffroy (1762) and junior objective synonyms of Linnaeus's (1758) names, 'required no action' by the Commission. Cogger also voted against Proposal J(4) (to place *Tinaea* Geoffroy, 1762 on the Official Index) for the same reason. (*Editorial note*. It has long been the Commission's practice to enter on the Official Index junior homonyms and junior objective synonyms when these become apparent during the course of an application since this serves as a permanent record of the fact that such names cannot be used as valid). Heppell voted against the

proposals on section E commenting that, although the names *Tettigonia* Linnaeus, 1758 and *Tetigonia* Geoffroy, 1762 are not homonyms under the present Code (Article 56b), they were deemed to be so at the time (Opinion 299; October 1954) when Geoffroy's name was rejected by the Commission as a junior homonym and that ruling still stood. Thompson voted without comment against the proposals on section K.

Original references

The following are the original references to the names placed on Official Lists and Official Indexes by the ruling given in the present Opinion:

Altica Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 244.
Anthrenus Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 113.
Anthribus Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 306.
aquaticus, *Oniscus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 637.
Asellus Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 2, p. 671.
bipustulata, *Tritoma*, Fabricius, 1775, *Systema entomologiae* ..., p. 68.
boleti, *Chrysomela*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 371.
Bostrichus Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 301.
Byrrhus Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 108.
Byrrhus Linnaeus, 1767, *Systema Naturae*, Ed. 12, vol. 1, part 2, p. 568.
capucinus, *Dermestes*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 355.
caraboides, *Scarabaeus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 354.
Cerocoma Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 357.
cinnabarina, *Meloe*, Scopoli, 1763, *Entomologia carniolica*, p. 60.
Cistela Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 115.
coccinea, *Cantharis*, Linnaeus, 1761, *Fauna Suecica*, Ed. 2, p. 202.
Copris Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 87.
coriarius, *Cerambyx*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 389.
Crioceris Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 237.
Cryptocephalus Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 231.
Cucujus Fabricius, 1775, *Systema entomologiae* ..., p. 204.
Cucujus Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 123.
cylindricus, *Ptilinus*, Müller, 1776, *Zoologiae Danicae prodromus*, p. 81.
Diaperis Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 337.
Diplolepis Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 2, p. 308.
Eulophus Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 2, p. 312.
fasciatus, *Anthribus*, Forster, 1770, *A catalogue of British insects*, p. 5.
fontisbellaquaei, *Omalisus*, Geoffroy in Fourcroy, 1785, *Entomologia Parisiensis*, vol. 1, p. 64.
Forbicina Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 2, p. 611.
Formicaleo Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 2, p. 256.
fuscus, *Ptilinus*, Geoffroy in Fourcroy, 1785, *Entomologia Parisiensis*, vol. 1, p. 4.
Galeruca Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 251.
gigas, *Ichneumon*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 560.
grossa, *Silpha*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 361.
Gyrinus Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 193.
Hepa Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 479.
Hydrophilus Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 180.
lunaris, *Scarabaeus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 346.
Mantes Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 399.
Melolontha Fabricius, 1775, *Systema entomologiae* ..., p. 31.
Melolontha Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 195.
melolontha, *Scarabaeus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 351.
meridiana, *Leptura*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 398.
monoceros, *Attelabus*, Linnaeus, 1761, *Fauna Suecica*, Ed. 2, p. 185.

natator, *Dytiscus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 412.
Notoxus Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 356.
oleracea, *Chrysomela*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 372.
Omalisus Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 179.
Peltis Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 117.
Peltis Kugelann, 1792, *Neuestes Magazin für die Liebhaber der Entomologie*, **4**: 508.
piceus, *Dytiscus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 411.
pilula, *Dermestes*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 356.
Pistella Müller, 1764, *Fauna insectorum Fridrichsdalina*, p. xiii.
Platycerus Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 59.
Prionus Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 198.
Ptilinus Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 64.
Pyrochroa Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 338.
ramicornis, *Ichneumon*, Fabricius, 1781, *Species insectorum*, vol. 1, p. 441.
Rhinomacer Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 269.
rosae, *Cynips*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 553.
schaefferi, *Meloe*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 420.
scrophulariae, *Dermestes*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 356.
sericea, *Chrysomela*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 374.
Stenocorus Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 221.
tanaceti, *Chrysomela*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 369.
Tritoma Fabricius, 1775, *Systema entomologiae* ..., p. 68.
Tritoma Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 1, p. 335.
Urocerus Geoffroy, 1762, *Histoire abrégée des insectes* ..., vol. 2, p. 264.

The following are the references for the designations of type species of Geoffroy's (1762) nominal genera:

Altica: **Latreille, P.A.** 1810. *Considerations générales sur ... les classes des crustacés, des arachnides et des insectes*, p. 432.
Anthrenus: **Mroczkowski, M.** 1968. *Annales Zoologici*, **26**: 139.
Anthribus: **Jordan, K.** 1931. *Novitates Zoologicae*, **36**: 287.
Asellus: **Fourcroy, A.F.** 1785. *Entomologia Parisiensis*, vol. 2, p. 541.
Bostrichus: **Latreille, P.A.** 1810. *Considerations générales sur ... les classes des crustacés, des arachnides et des insectes*, p. 431.
Cerocoma: **Fabricius, J.C.** 1775. *Systema entomologiae*, p. 262.
Copris: **Latreille, P.A.** 1810. *Considerations générales sur ... les classes des crustacés, des arachnides et des insectes*, p. 428.
Crioceris: BZN **27**: 12–13 (Opinion 908, June 1970).
Cryptocephalus: **Latreille, P.A.** 1810. *Considerations générales sur ... les classes des crustacés, des arachnides et des insectes*, p. 432.
Diaperis: **Müller, O.F.** 1776. *Zoologiae Danicae prodromus*, p. 74.
Diplolepis: **Karsch, F.A.F.** 1880. *Zeitschrift für die Gesammten Naturwissenschaften*, (3. F)**5**(53): 288.
Eulophus: **Olivier, A.G.** 1792. *Encyclopédie méthodique, histoire naturelle, insectes*, vol. 6, p. 454.
Galeruca: **Latreille, P.A.** 1810. *Considerations générales sur ... les classes des crustacés, des arachnides et des insectes*, p. 432.
Gyrinus: **Latreille, P.A.** 1810. *Considerations générales sur ... les classes des crustacés, des arachnides et des insectes*, p. 426.
Hydrophilus: **Latreille, P.A.** 1810. *Considerations générales sur ... les classes des crustacés, des arachnides et des insectes*, p. 428.
Notoxus: **Latreille, P.A.** 1810. *Considerations générales sur ... les classes des crustacés, des arachnides et des insectes*, p. 430.
Omalisus: **Fourcroy, A.F.** 1785. *Entomologia Parisiensis*, vol. 1, p. 64.

Platycerus: **Latreille, P.A.** 1810. *Considerations générales sur ... les classes des crustacés, des arachnides et des insectes*, p. 429.
Prionus: This Opinion, p. 60.
Ptilinus: **Müller, O.F.** 1776. *Zoologiae Danicae prodromus*, p. 81.
Pyrochroa: **Westwood, J.O.** [1838]. *Synopsis of the British insects*, p. 30. (Published with *An introduction to the modern classification of insects*, vol. 1, part 3).
Stenocorus: This Opinion, p. 60.
Urocerus: **Fourcroy, A.F.** 1785. *Entomologia Parisiensis*, vol. 2, p. 363.

The following are the references for the designations of type species of the nominal genera shown:
Byrrhus Linnaeus, 1767: **Latreille, P.A.** 1810. *Considerations générales sur ... les classes des crustacés, des arachnides et des insectes*, p. 428.
Peltis Kugelann, 1792: **Hope, F.W.** 1840. *The coleopterist's manual*, vol. 3. p. 150.
Tritoma Fabricius, 1775: **Latreille, P.A.** 1810. *Considerations générales sur ... les classes des crustacés, des arachnides et des insectes*, p. 432.

OPINION 1755

Podisus Herrich-Schaeffer, 1851 (Insecta, Heteroptera): *P. vittipennis* Herrich-Schaeffer, 1851 designated as the type species

Ruling

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Podisus* Herrich-Schaeffer, 1851 are hereby set aside and *Podisus vittipennis* Herrich-Schaeffer, 1851 is designated as the type species.

(2) The name *Podisus* Herrich-Schaeffer, 1851 (gender: masculine), type species by designation under the plenary powers in (1) above *Podisus vittipennis* Herrich-Schaeffer, 1851, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *vittipennis* Herrich-Schaeffer, 1851, as published in the binomen *Podisus vittipennis* (specific name of the type species of *Podisus* Herrich-Schaeffer, 1851), is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2828

An application for the designation of *Podisus vittipennis* Herrich-Schaeffer, 1851 as the type species of *Podisus* Herrich-Schaeffer, 1851 was received from Dr D.B. Thomas (*USDA-ARS Subtropical Agricultural Research Station, Westlaco, Texas, U.S.A.*) and Mr W.R. Dolling (*The Natural History Museum, London, U.K.*) on 29 July 1991. After correspondence the case was published in BZN **49**: 191–193 (September 1992). Notice of the case was sent to appropriate journals.

It was noted on the voting paper that the 20 additional references held by the Commission Secretariat (para. 7 of the application) which demonstrate usage of the name *Podisus* were all published since 1984. Dr Thomas noted (in litt., August 1991) 'I could easily provide 40 references all published since the compendium on *Podisus maculiventris* by McPherson (1980)'.

Decision of the Commission

On 1 September 1993 the members of the Commission were invited to vote on the proposals published in BZN **49**: 192. At the close of the voting period on 1 December 1993 the votes were as follows:

Affirmative votes — 27: Bayer, Bock, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — 1: Bouchet.

No vote was received from Uéno.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

Podisus Herrich-Schaeffer, 1851, *in*: *Die wanzenartigen Insecten*, vol. 9, part 6, p. 296.

vittipennis, *Podisus*, Herrich-Schaeffer, 1851, *in*: *Die wanzenartigen Insecten*, vol. 9, part 6, p. 339.

OPINION 1756

ANTHRIBIDAE Billberg, 1820 (Insecta, Coleoptera): given precedence over CHORAGIDAE Kirby, 1819

Ruling

(1) Under the plenary powers family-group names based on *Anthribus* Geoffroy, 1762 are hereby given precedence over those based on *Choragus* Kirby, 1819.

(2) The name *Choragus* Kirby, 1819 (gender: masculine), type species by monotypy *Choragus sheppardi* Kirby, 1819, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *sheppardi* Kirby, 1819, as published in the binomen *Choragus sheppardi* (specific name of the type species of *Choragus* Kirby, 1819), is hereby placed on the Official List of Generic Names in Zoology.

(4) The following names are hereby placed on the Official List of Family-Group Names in Zoology:

(a) ANTHRIBIDAE Billberg, 1820 (type genus *Anthribus* Geoffroy, 1762), with the endorsement that it and other family-group names based on *Anthribus* are to be given precedence over those based on *Choragus* Kirby, 1819;

(b) CHORAGIDAE Kirby, 1819 (type genus *Choragus* Kirby, 1819), with the endorsement that it and other family-group names based on *Choragus* are not to be given priority over those based on *Anthribus* Geoffroy, 1762.

History of Case 2795

An application for the conservation of the family-group name ANTHRIBIDAE Billberg, 1820 by giving it precedence over CHORAGIDAE Kirby, 1819 was received from Dr Hans Silfverberg (*Universitetets Zoologiska Museum, Helsingfors, Finland*) on 18 October 1990. After correspondence the case was published in BZN **49**: 194–195 (September 1992). Notice of the case was sent to appropriate journals.

A comment in support from Drs Beverley A. Holloway & Guillermo Kuschel (*Mt. Roskill, Auckland, New Zealand*) was published in BZN **50**: 57 (March 1993).

It was noted on the voting paper that 10 of the 11 representative works held by the Commission Secretariat (para. 3 of the application) which demonstrate usage of the name ANTHRIBIDAE were published no earlier than 1960.

Proposals to place on Official Lists the name *Anthribus*, the type genus of the family ANTHRIBIDAE, and that of its type species *A. fasciatus* Forster, 1770, were included in Case 2292 which was voted on concurrently by the Commission. Approval of the latter case has allowed *Anthribus* to be attributed to Geoffroy (1762) (see BZN **48**: 118, 127 and 129 and Opinion 1754, March 1994). The authorship and date of the generic name were not an issue in the present case.

Decision of the Commission

On 1 September 1993 the members of the Commission were invited to vote on the proposals published in BZN **49**: 194–195. At the close of the voting period on 1 December 1993 the votes were as follows:

Affirmative votes — 25: Bayer, Bock, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — 2: Bouchet and Savage.

No vote was received from Uéno.

Holthuis abstained because the status of *Anthribus* Geoffroy, 1762 was undecided at the time of voting.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

ANTHRIBIDAE Billberg, 1820, *Enumeratio insectorum in museo Gust. Joh. Billberg*, p. 39.

CHORAGIDAE Kirby, 1819, *Transactions of the Linnean Society of London*, **12**: 447.

Choragus Kirby, 1819, *Transactions of the Linnean Society of London*, **12**: 447.

sheppardi, *Choragus*, Kirby, 1819, *Transactions of the Linnean Society of London*, **12**: 448.

OPINION 1757

Cryptus Fabricius, 1804 and CRYPTINAE Kirby, 1837 (Insecta, Hymenoptera): conserved

Ruling

(1) Under the plenary powers the name *Cryptus* Panzer, 1804 is hereby suppressed for the purposes of both the Principle of Priority and the Principle of Homonymy.

(2) The name CRYPTINAE Kirby, 1837 (type genus *Cryptus* Fabricius, 1804) is hereby placed on the Official List of Family-Group Names in Zoology.

(3) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:

(a) *Cryptus* Jurine, 1801, as a name published in a work rejected for nomenclatural purposes;

(b) *Cryptus* Panzer, 1804, as suppressed in (1) above.

History of Case 2324

An application for the conservation of *Cryptus* Fabricius, 1804 was received from the late Mr G. van Rossem on 8 October 1979. After correspondence the case was published in BZN **44**: 9–10 (March 1987). Notice of the case was sent to appropriate journals.

Comments in opposition from the late Dr Henry Townes, and from Drs M.G. Fitton & I.D. Gauld (*The Natural History Museum, London, U.K.*) were published in BZN **48**: 325–327 (December 1991). A reply by the author of the application to Dr Townes's comment was published at the same time. Comments in support from the late Dr W.R.M. Mason, and from Drs Klaus Horstmann (*Zoologisches Institut der Universität Würzburg, Würzburg, Germany*) and C. van Achterberg (*Nationaal Natuurhistorisch Museum, Leiden, The Netherlands*) were also published in December 1991 (BZN **48**: 327–329). Further notes on the history of the names involved were published in BZN **48**: 329–330.

It was noted on the voting paper that, as stated in para. 5 of the application and in comment (7) on BZN **48**: 329, the problem in this case originated from two facts: (i) the failure of Opinion 157 (the purpose of which was to conserve *Cryptus* Fabricius, 1804) to suppress *Cryptus* Panzer because this was wrongly thought to be junior to the Fabricius name, and (ii) the refusal of the late H.K. Townes to accept the rejection (Opinion 135; August 1939) of the 'Erlangen List' containing *Cryptus* Jurine, 1801.

In Opinion 157 (February 1945) *Cryptus* Fabricius, 1804 was placed on the Official List of Generic Names with the type species *C. viduatorius* Fabricius, 1804; the specific name was placed on the Official List of Specific Names in Direction 4 (October 1954) (cf. para. 6 of the application).

A proposal to place CRYPTINAE Kirby, 1837, the senior family-group name, on the Official List completed the proposals on BZN **44**: 10 and was included on the voting paper.

Decision of the Commission

On 1 September 1993 the members of the Commission were invited to vote on the proposals published in BZN **44**: 10. At the close of the voting period on 1 December 1993 the votes were as follows:

Affirmative votes — 24: Bayer, Bock, Bouchet, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin, Willink

Negative votes — 3: Cocks, Heppell and Thompson.

No vote was received from Uéno.

Ride was on leave of absence.

Voting for, Lehtinen commented that while he was in favour of accepting *Cryptus* Fabricius, 1804 and CRYPTINAE Kirby, 1837, specialists in Hymenoptera were not in agreement on the usage of names for the taxa. Voting against, Heppell commented: 'I have discussed this case with Dr M.R. Shaw, a specialist on the taxonomy of parasitic wasps, who assures me that *Cryptus* Fabricius is no longer widely used in this group. The subfamily name PHYGADEUONTINAE Foerster, [1869] is now generally accepted as valid; Horstmann (1971 and numerous subsequent papers) is the only major author still to use CRYPTINAE. However, the important issue is for the Commission to make a definite decision in order to encourage nomenclatural stability, especially at the family-group level'.

Horstmann, K. 1971. Revision der europäischen Tersilochinen (Hymenoptera, Ichneumonidae). *Veröffentlichungen der Zoologischen Staatssammlung München*, **15**: 45–138.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

CRYPTINAE Kirby, 1837, *in* Richardson, J., *Fauna Boreali-Americana*, part 4, p. 259.

Cryptus Jurine, 1801, *Intelligenzblatt der Litteratur Zeitung, Erlangen*, vol. 1, no. 21, p. 163.

Cryptus Panzer, 1804, *Fauna insectorum Germanicae initia; oder Deutschlands Insecten* ..., Heft 88, pl. 17.

The following is the reference for the designation of *Cryptus viduatorius* Fabricius, 1804 as the type species of the nominal genus *Cryptus* Fabricius, 1804:

Curtis, J. 1837. *British Entomology*, vol. 14, pl. 668.

OPINION 1758

Vipio Latreille, 1804 (Insecta, Hymenoptera): *Agathis longicauda* Boheman, 1853 designated as the type species

Ruling

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Vipio* Latreille, 1804 are hereby set aside and *Agathis longicauda* Boheman, 1853 is designated as the type species.

(2) The name *Vipio* Latreille, 1804 (gender: masculine), type species by designation under the plenary powers in (1) above *Agathis longicauda* Boheman, 1853, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *longicauda* Boheman, 1853, as published in the binomen *Agathis longicauda* (specific name of the type species of *Vipio* Latreille, 1804) and as defined by the lectotype (specimen labelled (1) Sc. ar. [= Scanis arid]; (2) Bhn [= Boheman]; (3) 487 91 [pink label designating loan number for 1991]; (4) Riksmuseum Stockholm [green]; (5) lectotype label [red]) designated by Wharton (1991), is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2614

An application for the designation of *Agathis longicauda* Boheman, 1853 as the type species of *Vipio* Latreille, 1804 was received from Profs R.A. Wharton (*Texas A & M University, College Station, Texas, U.S.A.*) and the late W.R.M. Mason on 24 June 1987. After correspondence the case was published in BZN **48**: 45–49 (March 1991). Notice of the case was sent to appropriate journals.

An opposing comment from Dr C. van Achterberg (*Nationaal Natuurhistorisch Museum, Leiden, The Netherlands*) was published in BZN **48**: 248–250 (September 1991). Replies by both authors of the application were published in BZN **48**: 331–332 (December 1991). A comment in support from Dr Michael J. Sharkey (*Biosystematics Research Centre, Ottawa, Ontario, Canada*) was published in BZN **48**: 250, and further supportive comments from Dr Paul M. Marsh (*Systematic Entomology Laboratory, U.S.D.A., c/o National Museum of Natural History, Washington, D.C., U.S.A.*) and Prof Scott R. Shaw & Dr Mian Inayatollah (*College of Agriculture, University of Wyoming, Wyoming, U.S.A.*) were published in BZN **48**: 332–333.

It was noted on the voting paper that the case related to the usage of the generic name *Vipio* Latreille, 1804 in two different senses, referring to taxa in the subfamilies BRACONINAE and AGATHIDINAE. Until 1982 the genus was included in the BRACONINAE and the usage was stable.

Among the three nominal species placed in his new genus *Vipio*, Latreille (1804) included *Ichneumon desertor*, attributing authorship of the latter to Fabricius. However, Fabricius (1775) had misidentified *I. desertor* Linnaeus, 1758. Foerster (1862), apparently aware of the misidentification, designated '*desertor* F.' as the type species of *Vipio*; at the same time he designated the true *desertor* Linnaeus (under the deliberately but invalidly proposed replacement name *Bracon deflagrator* Spinola, 1808) as the type of his new genus *Cremnops*, which has since had long-standing usage in the AGATHIDINAE.

Van Achterberg (1982 and comment on BZN **48**: 248) took *Vipio* to be a senior objective synonym of *Cremnops* in the AGATHIDINAE, since he regarded '*desertor* Fabricius' as being nomenclaturally the same as *desertor* Linnaeus. Van Achterberg (1982) used the name *Isomecus* Kriechbaumer, 1895 in place of *Vipio* auctt., following its mention (but not adoption) by Fahringer (1928, ref. 1928a in the application).

Kriechbaumer's (1895) paper, in which the name *Isomecus* was published, is a rare work; Viereck (1914) recorded that he had been unable to find a copy. A search in 1992-1993 eventually located a copy in the University of Münster in Westfalia. The paper appeared in a serial publication which consisted of the annual reports of a college. Both the name *Isomecus* and that of its type species by monotypy, *I. schlettereri* Kriechbaumer, 1895, are available but *Isomecus* remained unused until van Achterberg's adoption in 1982. The specific name of *I. schlettereri* was treated as valid for a species in *Vipio* by Fahringer (1928). Fahringer's redescription of *schlettereri* is quite clearly that of a species of *Vipio* (in the sense of Latreille's original description) but its status among other European species is at present unresolved.

After 1982 the stability of usage of both *Vipio* and *Cremnops* was disturbed. Three generic names, including *Vipio*, were in use for the same group of braconine species (see van Achterberg's comment on BZN **48**: 249; Wharton, in litt., June 1993), whilst both *Cremnops* and *Vipio* were employed for the agathidinine group of species (para. 8 of the application and van Achterberg's comment).

The identity of *desertor* sensu Fabricius (1775) cannot be determined from Fabricius's composite syntype collection; the two other nominal species originally included in *Vipio* are the types of distinct genera. *I. nominator* Fabricius, 1793, the nominal species which has been treated as the type of *Vipio*, was not an originally included species and its name is a junior homonym; the application therefore proposed that *Agathis longicauda* Boheman, 1853, the next available synonym, be designated the type species of *Vipio*. This species belongs to *Vipio* in the braconine sense of Latreille (1804) and is defined by the lectotype designated by Wharton (1991).

Decision of the Commission

On 1 September 1993 the members of the Commission were invited to vote on the proposals published in BZN **48**: 48. At the close of the voting period on 1 December 1993 the votes were as follows:

Affirmative votes — 24: Bayer, Bock, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Kabata, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — 2: Bouchet and Holthuis.

Lehtinen abstained.

No vote was received from Uéno.

Ride was on leave of absence.

Lehtinen commented that it was clear that *Vipio* must be treated as a braconine genus but the identity of some of the nominal species involved appeared to be uncertain.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:
longicauda, *Agathis*, Boheman, 1853, *Kongliga Vetenskaps-Akademiens Handlingar*, **1851**: 178.
Vipio Latreille, 1804, *in*: *Nouveau dictionnaire d'histoire naturelle* ..., Ed. 1, vol. 24, p. 173.

The following is the reference for the designation of the lectotype of *Agathis longicauda* Boheman, 1853:
Wharton, R.A. 1991. BZN **48**: 332.

OPINION 1759

Acamptopoeum Cockerell, 1905 (Insecta, Hymenoptera): *Camptopoeum submetallicum* Spinola, 1851 designated as the type species

Ruling

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Acamptopoeum* Cockerell, 1905 are hereby set aside and *Camptopoeum submetallicum* Spinola, 1851 is designated as the type species.

(2) The name *Acamptopoeum* Cockerell, 1905 (gender: neuter), type species by designation under the plenary powers in (1) above *Camptopoeum submetallicum* Spinola, 1851, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *submetallicum* Spinola, 1851, as published in the binomen *Camptopoeum submetallicum* (specific name of the type species of *Acamptopoeum* Cockerell, 1905), is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2812

An application for the designation of *Camptopoeum submetallicum* Spinola, 1851 as the type species of *Acamptopoeum* Cockerell, 1905 was received from Dr Luisa Ruz (*Universidad Catolica de Valparaiso, Valparaiso, Chile*) on 22 March 1991. After correspondence the case was published in BZN **49**: 205–206 (September 1992). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 September 1993 the members of the Commission were invited to vote on the proposals published in BZN **49**: 206. At the close of the voting period on 1 December 1993 the votes were as follows:

Affirmative votes — 28: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — none.

No vote was received from Uéno.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

Acamptopoeum Cockerell, 1905, *Transactions of the American Entomological Society*, **31**: 320.

submetallicum, *Camptopoeum*, Spinola, 1851, *in* Gay, C., *Historia Física y Política de Chile*, vol. 6, p. 198.

OPINION 1760

Rhipidocystis Jaekel, 1901 (Echinodermata, Eocrinoidea): *R. baltica* Jaekel, 1901 designated as the type species

Ruling

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Rhipidocystis* Jaekel, 1901 prior to that by Hecker (1940) of *Rhipidocystis baltica* Jaekel, 1901 are hereby set aside.

(2) The name *Rhipidocystis* Jaekel, 1901 (gender: feminine), type species by designation under the plenary powers in (1) above *Rhipidocystis baltica* Jaekel, 1901, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *baltica* Jaekel, 1901, as published in the binomen *Rhipidocystis baltica* (specific name of the type species of *Rhipidocystis* Jaekel, 1901), is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2760

An application for the designation of *Rhipidocystis baltica* Jaekel, 1901 as the type species of *Rhipidocystis* Jaekel, 1901 was received from Dr S.V. Rozhnov (*Paleontological Institute, Academy of Sciences, Moscow, Russia*) on 16 February 1990. After correspondence the case was published in BZN **49**: 41–42 (March 1992). Notice of the case was sent to appropriate journals.

Comments in support from Dr R.P.S. Jefferies (*The Natural History Museum, London, U.K.*) and Prof G. Ubaghs (*Sprimont, Belgium*) were published in BZN **50**: 57 (March 1993).

Decision of the Commission

On 1 September 1993 the members of the Commission were invited to vote on the proposals published in BZN **49**: 42. At the close of the voting period on 1 December 1993 the votes were as follows:

Affirmative votes — 25: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Thompson, Willink

Negative votes — 1: Štys.

No votes were received from Trjapitzin and Uéno.

Ride was on leave of absence.

Štys commented that insufficient information had been given on the current status of *Rhipidocystis gigas* Jaekel, 1901 and how its acceptance as the type species of *Rhipidocystis* would affect the concepts of this and other genera (cf. paras. 2-4 of the application).

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

baltica, *Rhipidocystis*, Jaekel, 1901, *Zeitschrift der Deutschen geologischen Gesellschaft*, **52**(4): 665, text-fig. 3.

Rhipidocystis, Jaekel, 1901, *Zeitschrift der Deutschen geologischen Gesellschaft*, **52**(4): 672.

OPINION 1761

Filimanus Myers, 1936 (Osteichthyes, Perciformes): *Filimanus perplexa* Feltes, 1991 designated as the type species

Ruling

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Filimanus* Myers, 1936 are hereby set aside and *Filimanus perplexa* Feltes, 1991 is designated as the type species.

(2) The name *Filimanus* Myers, 1936 (gender: feminine), type species by designation under the plenary powers in (1) above *Filimanus perplexa* Feltes, 1991, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *perplexa* Feltes, 1991, as published in the binomen *Filimanus perplexa* (specific name of the type species of *Filimanus* Myers, 1936), is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2601

An application for the designation of *Filimanus perplexa* Feltes, 1991 as the type species of *Filimanus* Myers, 1936 was received from Dr Ross M. Feltes (*Museum of Biological Diversity, The Ohio State University, Columbus, Ohio, U.S.A.*) on 8 August 1991. After correspondence the case was published in BZN **49**: 209–210 (September 1992). Notice of the case was sent to appropriate journals.

It was noted on the voting paper that Feltes (1991) included five species in *Filimanus* Myers, 1936 additional to the type species (para. 3 of the application). The paper by Feltes (1993) in which *Filimanus* is mentioned, noted as 'in press' in the application, was published in *Copeia*, **1993**(1): 207–215 (February 1993).

Decision of the Commission

On 1 September 1993 the members of the Commission were invited to vote on the proposals published in BZN **49**: 210. At the close of the voting period on 1 December 1993 the votes were as follows:

Affirmative votes — 27: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — 1: Holthuis.

No vote was received from Uéno.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

Filimanus Myers, 1936, *Journal of the Washington Academy of Sciences*, **26**(9): 379.

perplexa, Filimanus, Feltes, 1991, *Copeia*, **1991**(2): 307.

OPINION 1762

Cynolebias opalescens Myers, 1942 and *C. splendens* Myers, 1942 (Osteichthyes, Cyprinodontiformes): specific names conserved

Ruling

(1) Under the plenary powers the following specific names are hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:

(a) *fluminensis* Faria & Muller, 1937, as published in the binomen *Cynopoecilus fluminensis*;

(b) *sandrii* Faria & Muller, 1937, as published in the binomen *Gynopoecilus* (recte *Cynopoecilus*) *sandrii*.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *opalescens* Myers, 1942, as published in the binomen *Cynolebias opalescens*;

(b) *splendens* Myers, 1942, as published in the binomen *Cynolebias splendens*.

(3) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:

(a) *fluminensis* Faria & Muller, 1937, as published in the binomen *Cynopoecilus fluminensis* and as suppressed in (1)(a) above;

(b) *sandrii* Faria & Muller, 1937, as published in the binomen *Gynopoecilus* (recte *Cynopoecilus*) *sandrii* and as suppressed in (1)(b) above.

History of Case 2792

An application for the conservation of the specific names of *Cynolebias opalescens* and *C. splendens*, both of Myers (1942), was received from Drs Carl J. Ferraris and Kenneth J. Lazara (*American Museum of Natural History, New York, N.Y., U.S.A.*) on 4 October 1990. After correspondence the case was published in BZN **49**: 207–208 (September 1992). Notice of the case was sent to appropriate journals.

Further information on the history of the publications by Faria & Muller (1937) and Myers (1942) was published in BZN **49**: 233 (September 1992).

It was noted on the voting paper that the species were included under the names *Cynolebias opalescens* and *C. splendens* in recent publications (1991, p. 39; 1992, p. 20) issued by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (para. 3 of the application).

CITES. 1991. List of CITES Appendix Amendment Proposals. *Traffic Bulletin*, **12**(3): 38–40.

CITES. 1992. Amendment Proposals — Results. *Traffic Bulletin*, **13**(1): 19–22.

Decision of the Commission

On 1 September 1993 the members of the Commission were invited to vote on the proposals published in BZN **49**: 208. At the close of the voting period on 1 December 1993 the votes were as follows:

Affirmative votes — 21: Bayer, Bock, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Kabata, Kraus, Macpherson, Mahnert, Minelli, Nielsen, Savage, Schuster, Starobogatov, Štys, Trjapitzin, Willink

Negative votes — 5: Holthuis, Lehtinen, Martins de Souza, Nye and Thompson.

Bouchet abstained.

No vote was received from Uéno.

Ride was on leave of absence.

Bouchet commented: 'I am prepared to reject Faria & Muller's (1937) paper on the grounds that *Revista Naval* was not published for the purpose of providing a permanent scientific record but I am not prepared to reject the names *fluminensis* and *sandrii* 'only on the question of whether the widespread adoption of a junior synonym outside of the systematic community is sufficient to justify its continued use' (BZN **49**: 233, para. 1). Listing by CITES is not sufficient to demonstrate that there is widespread adoption of Myers's names'. Dupuis commented that he voted in favour solely because Myers's (1942) names were included in CITES publications. Holthuis commented that since all the names were relatively recently published priority should prevail. Kabata said that he voted for the case with reluctance. Lehtinen commented: 'The listing of names in a *Red Data Book* or similar publication is an important additional consideration in problematic cases but the suppression of names which are some years older cannot be accepted mainly on this basis'. Thompson commented: 'When workers correctly and properly follow the principles and Code of nomenclature and use the senior names for species which were only recently discovered, some specialists ignore their actions, waiting a few years until the junior names have existed for 50 years so as to apply for their conservation. Such actions are unethical and contrary to the principles of science and should not be endorsed'. (*Editorial note*. Drs Ferraris & Lazara did not wait until 50 years after the publication of Myers (1942). They submitted their application in October 1990 and wrote (May 1992) that they would have supported the resurrection of the names of Faria & Muller (1937) were it not for the widespread adoption of Myers's names by government and conservation organisations).

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

fluminensis, *Cynopoecilus*, Faria & Muller, 1937, *Revista Naval*, **37**(3): 99.

opalescens, *Cynolebias*, Myers, 1942, *Stanford Ichthyological Bulletin*, **2**(4): 107.

sandrii, *Gynopoecilus* (recte *Cynopoecilus*), Faria & Muller, 1937, *Revista Naval*, **37**(3): 98.

splendens, *Cynolebias*, Myers, 1942, *Stanford Ichthyological Bulletin*, **2**(4): 110.

OPINION 1763

Megophrys montana Kuhl & van Hasselt, 1822 (Amphibia, Anura): generic and specific names placed on Official Lists, and *Leptobrachium parvum* Boulenger, 1893 (currently *Megophrys parva*): specific name conserved

Ruling

(1) Under the plenary powers:

(a) the specific name *monticola* Günther, 1864, as published in the binomen *Xenophrys monticola*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(b) the name *monticola* Kuhl & van Hasselt, 1822, as published in the binomen *Megophrys monticola*, is hereby ruled to be an incorrect original spelling of *Megophrys montana* Kuhl & van Hasselt, 1822.

(2) The name *Megophrys* Kuhl & van Hasselt, 1822 (gender: feminine), type species by monotypy *Megophrys montana* Kuhl & van Hasselt, 1822, is hereby placed on the Official List of Generic Names in Zoology.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *montana* Kuhl & van Hasselt, 1822, as published in the binomen *Mogophrys* [sic] *montana* (specific name of the type species of *Megophrys* Kuhl & van Hasselt, 1822);

(b) *parvum* Boulenger, 1893, as published in the binomen *Leptobrachium parvum* and as defined by the lectotype designated by Capocaccia (1957).

(4) The name *Megalophrys* Wagler, 1830 is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology (an unjustified emendation of *Megophrys* Kuhl & van Hasselt, 1822).

(5) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:

(a) *monticola* Günther, 1864, as published in the binomen *Xenophrys monticola* and as suppressed in (1)(a) above;

(b) *monticola* Kuhl & van Hasselt, 1822, as published in the binomen *Megophrys monticola* and as ruled in (1)(b) above to be an incorrect original spelling of *montana* Kuhl & van Hasselt, 1822.

History of Case 2382

An application for both the generic and specific names of *Megophrys montana* Kuhl & van Hasselt, 1822 to be placed on Official Lists, and for the conservation of the specific name of *Leptobrachium parvum* Boulenger, 1893, was received from Prof Alain Dubois (*Muséum National d'Histoire Naturelle, Paris, France*) on 2 June 1981. After correspondence the case was published in BZN **49**: 213–216 (September 1992). Notice of the case was sent to appropriate journals.

It was noted on the voting paper that Kuhl & van Hasselt's article in Dutch consisted of two letters originally written three weeks apart (18 July and 8 August

1821). The specific name appeared as *montana* in the first letter and as *monticola* in the second letter; both versions were published simultaneously the following year (ref. 1822a in the application).

Decision of the Commission

On 1 September 1993 the members of the Commission were invited to vote on the proposals published in BZN **49**: 214–215. At the close of the voting period on 1 December 1993 the votes were as follows:

Affirmative votes — 28: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — none.

No vote was received from Uéno.

Original references

The following are the original references to the names placed on Official Lists and Official Indexes by the ruling given in the present Opinion:

Megalophrys Wagler, 1830, *Natürliches System der Amphibien* ..., p. 204.

Megophrys (misspelt as '*Mogophrys*') Kuhl & van Hasselt, 1822, *Algemeene Konst- en Letter-Bode*, **7**: 102.

montana, *Mogophrys* (recte *Megophrys*), Kuhl & van Hasselt, 1822, *Algemeene Konst- en Letter-Bode*, **7**: 102.

monticola, *Megophrys*, Kuhl & van Hasselt, 1822, *Algemeene Konst- en Letter-Bode*, **7**: 104 (an incorrect original spelling of *montana*).

monticola, *Xenophrys*, Günther, 1864, *The reptiles of British India*, p. 414.

parvum, *Leptobrachium*, Boulenger, 1893, *Annali del Museo Civico di Storia Naturale di Genova*, (2a)**13**: 344.

The following is the reference for the designation of the lectotype of *Leptobrachium parvum* Boulenger, 1893:

Capocaccia, L. 1957. *Annali del Museo Civico di Storia Naturale di Genova*, **69**: 211.

OPINION 1764

Anas arcuata Horsfield, 1824 (currently *Dendrocygna arcuata*; Aves, Anseriformes): specific name conserved

Ruling

(1) Under the plenary powers:

(a) it is hereby ruled that the specific name *arcuata* Horsfield, 1824, as published in the binomen *Anas arcuata*, is to be treated as the specific name of a then new nominal species;

(b) all previous fixations of type specimen for the nominal species *Anas javanica* Horsfield, 1821 are hereby set aside and specimen no. 1880.1.1.4742 in the collections at Tring of the Natural History Museum, London, is designated as the lectotype;

(c) all previous fixations of type specimen for the nominal species *Anas arcuata* Horsfield, 1824 are hereby set aside and specimen no. 1880.1.1.2436 in the collections at Tring of the Natural History Museum, London, is designated as the lectotype.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *javanica* Horsfield, 1821, as published in the binomen *Anas javanica* and as defined by the lectotype designated in (1)(b) above;

(b) *arcuata* Horsfield, 1824, as published in the binomen *Anas arcuata* and as defined by the lectotype designated in (1)(c) above.

History of Case 2746

An application for the conservation of the specific name of *Anas arcuata* Horsfield, 1824 was originally received from Dr G.F. Mees (then of the *Nationaal Natuurhistorisch Museum, Leiden, The Netherlands*) in November 1989. Dr Mees wrote in 1991 that, following his retirement, he did not have ready access to the literature and no longer wished to pursue the case; the Commission Secretariat therefore did not put it forward in his name. The case was published in BZN **48**: 319–321 (December 1991) and notice was sent to appropriate journals.

Prof Walter J. Bock (Chairman of the Standing Committee on Ornithological Nomenclature (SCON) of the International Ornithological Congress, *Columbia University, New York, N.Y., U.S.A.*) reported on support from members of SCON to conserve the name *Anas arcuata* and to designate a lectotype. He noted: 'For well over 100 years ornithologists have consistently used the names *Dendrocygna javanica* (Horsfield, 1821) and *D. arcuata* (Horsfield, 1824) for two species of ducks despite the fact that their nomenclatural history has included errors ... No doubts exist that when Horsfield (1821) proposed the name *javanica* he had a composite type series including specimens of species now recognized as *Dendrocygna javanica* and *D. arcuata*. Moreover, when Horsfield (1824) published the name *arcuata* it was clearly meant as a replacement name for his earlier *javanica* (cf. Mees, 1989). After Blyth (1865) pointed out that the type series of Horsfield contained two species ornithologists used the two Horsfield names for each of the species'. Prof Bock added that Dr David Holyoak, a member of SCON, had examined the proposed lectotypes of *javanica* and *arcuata* and had verified that they are specimens of the two species with which these

two names have been long associated. Another SCON member, Dr Richard Schodde, had discussed the case.

Prof Bock wrote that he and some members of SCON did not agree with the procedure adopted in the application and did not consider that it should have been put forward by the Secretariat rather than in the name of Dr Mees. [This was done for the reason stated above (with explanation in the footnote on BZN **48**: 319) since applications are published on behalf of the zoological community as a whole].

The application was submitted on the basis of setting aside Article 72e of the Code. The Commission was asked (proposal (1) on BZN **48**: 320) to use its plenary powers to rule that the specific name of *A. arcuata* Horsfield, 1824 is no longer to be treated as a replacement name for (and therefore a junior objective synonym of) *A. javanica* Horsfield, 1821. Approval of this proposal would allow the designation of a lectotype for *A. arcuata* (proposal (2)).

Since the nominal species *A. javanica*, as published by Horsfield (1821), was composite a lectotype was designated in the application (para. 6). Prof Bock proposed that the specific name of *A. javanica* be placed on the Official List, in addition to that of *A. arcuata*. This proposal was added to those in para. 7 and included on the voting paper.

Decision of the Commission

On 1 September 1993 the members of the Commission were invited to vote on the proposals published in BZN **48**: 320, together with the placement of the specific name of *Anas javanica* Horsfield, 1821 on the Official List of Specific Names. At the close of the voting period on 1 December 1993 the votes were as follows:

Affirmative votes — 27: Bayer, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — 1: Bock.

No vote was received from Uéno.

Bock voted against because he did not agree with the procedure that had been followed (see above). Ride commented: 'I return a conditional vote because, although I support the intention of the application, the outcome remains vulnerable without additional action under the plenary powers. Since the lectotype selected by the applicant is not protected by the plenary powers it could be supplanted by a lectotype properly designated prior to the date of the application'.

To secure completely the ruling in this case the Commission was asked to set aside any earlier type fixation for either the nominal species *A. javanica* or *A. arcuata*; under Article 72e a lectotype fixation for *A. arcuata* would have applied to *A. javanica* also. A supplementary proposal to this end was sent to the members of the Commission for a one-month vote in December 1993; 22 Commissioners voted in favour and none against.

Original references

The following are the original references to the names placed on an Official List by the ruling given in the present Opinion:

arcuata, *Anas*, Horsfield, 1824, *in*: *Zoological researches in Java, and the neighbouring islands*, part 8, pl. [65].

javanica, *Anas*, Horsfield, 1821, *Transactions of the Linnean Society of London*, **13**(1): 199.

INFORMATION AND INSTRUCTIONS FOR AUTHORS

The following notes are primarily for those preparing applications; other authors should comply with the relevant sections. Applications should be prepared in the format of recent parts of the Bulletin; manuscripts not prepared in accordance with these guidelines may be returned.

General. Applications are requests to the Commission to set aside or modify the Code's provisions as they relate to a particular name or group of names when this appears to be in the interest of stability of nomenclature. Authors submitting cases should regard themselves as acting on behalf of the zoological community and the Commission will treat applications on this basis. Applicants are advised to discuss their cases with other workers in the same field before submitting applications, so that they are aware of any wider implications and the likely reactions of other zoologists.

Text. Typed in double spacing, this should consist of numbered paragraphs setting out the details of the case and leading to a final paragraph of formal proposals. Text references should give dates and page numbers in parentheses, e.g. 'Daudin (1800, p. 39) described . . .'. The Abstract will be prepared by the Secretariat.

References. These should be given for all authors cited. Where possible, ten or more relatively recent references should be given illustrating the usage of names which are to be conserved or given precedence over older names. The title of periodicals should be in full and be underlined; numbers of volumes, parts, etc. should be in arabic figures, separated by a colon from page numbers. Book titles should be underlined and followed by the number of pages and plates, the publisher and place of publication.

Submission of Application. Two copies should be sent to: The Executive Secretary, The International Commission on Zoological Nomenclature, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. It would help to reduce the time that it takes to process the large number of applications received if the typescript could be accompanied by a disk with copy in IBM PC compatible format, preferably in ASCII text. It would also be helpful if applications were accompanied by photocopies of relevant pages of the main references where this is possible.

The Commission's Secretariat is very willing to advise on all aspects of the formulation of an application.

Contents — *continued*

On the proposed designation of a neotype for *Coelophysis bauri* (Cope, 1887) (Reptilia, Saurischia). S.P. Welles; G. Olshevsky; E.L. Nicholls; L.L. Jacobs; D.F. Glut; A. de Ricqlès; P.K. Tubbs 48
On the proposed conservation of *Emys* Duméril, 1806 (Reptilia, Testudines). H.M. Smith 52
On the proposed conservation of the subspecific name of *Catharacta antarctica lonnbergi* Mathews, 1912 (currently *Catharacta skua lonnbergi*; Aves, Charadriiformes). J.-F. Voisin, C. Voisin, W.J. Bock & M. Théry 52

Rulings of the Commission

OPINION 1752. *Zanclea costata* Gegenbaur, 1856 (Cnidaria, Hydrozoa): generic and specific names conserved 54
OPINION 1753. *Gebia major capensis* Krauss, 1843 (currently *Upogebia capensis*; Crustacea, Decapoda): neotype replaced, so conserving the usage of *G. capensis* and also that of *G. africana* Ortmann, 1894 (currently *Upogebia africana*) . . . 56
OPINION 1754. *Histoire abrégée des insectes qui se trouvent aux environs de Paris* (Geoffroy, 1762): some generic names conserved (Crustacea, Insecta) 58
OPINION 1755. *Podisus* Herrich-Schaeffer, 1851 (Insecta, Heteroptera): *P. vittipennis* Herrich-Schaeffer, 1851 designated as the type species 71
OPINION 1756. ANTHRIBIDAE Billberg, 1820 (Insecta, Coleoptera): given precedence over CHORAGIDAE Kirby, 1819 72
OPINION 1757. *Cryptus* Fabricius, 1804 and CRYPTINAE Kirby, 1837 (Insecta, Hymenoptera): conserved 74
OPINION 1758. *Vipio* Latreille, 1804 (Insecta, Hymenoptera): *Agathis longicauda* Boheman, 1853 designated as the type species 76
OPINION 1759. *Acamptopoeum* Cockerell, 1905 (Insecta, Hymenoptera): *Camptopoeum submetallicum* Spinola, 1851 designated as the type species 79
OPINION 1760. *Rhipidocystis* Jaekel, 1901 (Echinodermata, Eocrinoidea): *R. baltica* Jaekel, 1901 designated as the type species 80
OPINION 1761. *Filimanus* Myers, 1936 (Osteichthyes, Perciformes): *Filimanus perplexa* Feltes, 1991 designated as the type species 81
OPINION 1762. *Cynolebias opalescens* Myers, 1942 and *C. splendens* Myers, 1942 (Osteichthyes, Cyprinodontiformes): specific names conserved 82
OPINION 1763. *Megophrys montana* Kuhl & van Hasselt, 1822 (Amphibia, Anura): generic and specific names placed on Official Lists, and *Leptobrachium parvum* Boulenger, 1893 (currently *Megophrys parva*): specific name conserved 84
OPINION 1764. *Anas arcuata* Horsfield, 1824 (currently *Dendrocygna arcuata*; Aves, Anseriformes): specific name conserved 86

Information and Instructions for Authors 88

CONTENTS

Page

Notices 1
The International Commission on Zoological Nomenclature and its publications . 2
Addresses of members of the Commission 3
International Trust for Zoological Nomenclature. 4
Fourth Edition of the International Code of Zoological Nomenclature 5
The International Code of Zoological Nomenclature 5
Official Lists and Indexes of Names and Works in Zoology — Second Supplement to 1990 6
The European Association for Zoological Nomenclature. 6

Applications

Doris grandiflora Rapp, 1827 (currently *Dendrodoris grandiflora*; Mollusca, Gastropoda): proposed conservation of the specific name. J. Ortea & Á. Valdés. 7
Johnstonia Quatrefages, 1866 (Annelida, Polychaeta): proposed conservation. A.S.Y. Mackie & J. Gobin 10
Mastotermes darwiniensis Froggatt, 1897 and *Termes meridionalis* Froggatt, 1898 (currently *Amitermes meridionalis*) (Insecta, Isoptera): proposed retention of neotypes following rediscovery of syntypes. J.A.L. Watson 14
COLYDIIDAE Erichson, 1842 (Insecta, Coleoptera): proposed precedence over CERYLONIDAE Billberg, 1820 and ORTHOCERINI Blanchard, 1845 (1820); and *Cerylon* Latreille, 1802: proposed conservation of *Lyctus histeroides* Fabricius, 1792 as the type species. H. Silfverberg 17
Cryptophagus Herbst, 1792, *Dorcatoma* Herbst, 1792, *Rhizophagus* Herbst, 1793 and *Colon* Herbst, 1797 (Insecta: Coleoptera): proposed conservation as the correct spellings, and proposed conservation of *Lyctus bipustulatus* Fabricius, 1792 as the type species of *Rhizophagus*. H. Silfverberg 21
ELMIDAE Curtis, 1830 and *Elmis* Latreille, 1802 (Insecta, Coleoptera): proposed conservation as correct spelling and of feminine gender respectively. M.A. Jäch . 25
Hydrophoria Robineau-Desvoidy, 1830 (Insecta, Diptera): proposed designation of *Musca lancifer* Harris, [1780] as the type species. G.C.D. Griffiths 28
Sicus Scopoli, 1763 and *Myopa* Fabricius, 1775 (Insecta, Diptera): proposed conservation by the designation of *Conops buccata* Linnaeus, 1758 as the type species of *Myopa*. S. Camras 31
Alestes Müller & Troschel, 1844 (Osteichthyes, Characiformes): conservation proposée. J. Géry & V. Mahnert 35

Comments

On the proposed stabilization of usage of the name *Ceratites nodosus* (Mollusca, Ammonoidea). G. Hahn 41
On the proposed conservation of the specific name of *Notonecta obliqua* Thunberg, 1787 (Insecta, Heteroptera). I.M. Kerzhner; A. Jansson 41
On the proposed conservation of usage of some generic names in the BUPRESTIDAE (Insecta, Coleoptera). H. Mühle; R.L. Westcott; G.H. Nelson. 43
On the proposed conservation of the specific name of *Rivulus marmoratus* Poey, 1880 (Osteichthyes, Cyprinodontiformes). W.J.E.M. Costa; K.J. Lazara & M.L. Smith 46

Continued on Inside Back Cover

Printed in Great Britain by Henry Ling Ltd., at the Dorset Press, Dorchester, Dorset

Volume 51, Part 2, 30 June 1994 pp. 89–184 ISSN 0007–5167

THE NATURAL HISTORY MUSEUM
30 JUN 1994
PURCHASED
ZOOLOGY LIBRARY

The Bulletin of Zoological Nomenclature

ICZN *The Official Periodical of the International Commission on Zoological Nomenclature*

THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

The *Bulletin* is published four times a year for the International Commission on Zoological Nomenclature by the International Trust for Zoological Nomenclature, a charity (no. 211944) registered in England. The annual subscription for 1994 is £85 or $165, postage included. All manuscripts, letters and orders should be sent to:

The Executive Secretary,
International Commission on Zoological Nomenclature,
c/o The Natural History Museum,
Cromwell Road,
London, SW7 5BD, U.K. (Tel. 071-938 9387)

INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Officers

President	Prof Dr O. Kraus (*Germany*)
Vice-President	Dr H. G. Cogger (*Australia*)
Secretary-General	Dr I. W. B. Nye (*United Kingdom*)
Executive Secretary	Dr P. K. Tubbs (*United Kingdom*)

Members

Dr F. M. Bayer (*U.S.A.: Corallia*)
Prof W. J. Bock (*U.S.A.; Ornithology*)
Dr P. Bouchet (*France; Mollusca*)
Dr L. R. M. Cocks (*U.K.; Brachiopoda*)
Dr H. G. Cogger (*Australia; Herpetology*)
Prof J. O. Corliss (*U.S.A.; Protista*)
Prof C. Dupuis (*France; Heteroptera*)
Prof Dr G. Hahn (*Germany; Trilobita*)
Prof Dr O. Halvorsen (*Norway; Parasitology*)
Mr D. Heppell (*U.K.; Mollusca*)
Prof L. B. Holthuis (*The Netherlands; Crustacea*)
Dr Z. Kabata (*Canada; Copepoda*)
Prof Dr O. Kraus (*Germany; Arachnology*)
Dr P. T. Lehtinen (*Finland; Arachnology*)
Dr E. Macpherson (*Spain; Crustacea*)
Dr V. Mahnert (*Switzerland; Ichthyology*)
Prof U. R. Martins de Souza (*Brazil; Coleoptera*)
Prof A. Minelli (*Italy; Myriapoda*)
Dr C. Nielsen (*Denmark; Bryozoa*)
Dr I. W. B. Nye (*U.K.; Lepidoptera*)
Prof W. D. L. Ride (*Australia; Mammalia*)
Prof J. M. Savage (*U.S.A; Herpetology*)
Prof Dr R. Schuster (*Austria; Acari*)
Dr Y. I. Starobogatov (*Russia; Mollusca*)
Dr P. Štys (*Czech Republic; Heteroptera*)
Dr F. C. Thompson (*U.S.A.; Diptera*)
Dr V. A. Trjapitzin (*Russia; Hymenoptera*)
Dr Shun-Ichi Uéno (*Japan; Entomology*)
Prof A. Willink (*Argentina; Hymenoptera*)

Secretariat

Dr P. K. Tubbs (*Executive Secretary and Editor*)
Mr J. D. D. Smith, B.Sc., B.A. (*Scientific Administrator*)
Mrs A. Gentry, B.Sc. (*Zoologist*)

Officers of the International Trust for Zoological Nomenclature

Dr S. Conway Morris, F.R.S. (*Chairman*)
Dr M. K. Howarth (*Secretary and Managing Director*)

© International Trust for Zoological Nomenclature 1994

THE NATURAL HISTORY MUSEU
30 JUN 1994
PURCHASED
ZOOLOGY LIBRA

BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 51, part 2 (pp. 89–184) 30 June 1994

Notices

(a) *Invitation to comment.* The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles.* At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications.* The following new applications have been received since going to press for volume 51, part 1 (published on 30 March 1994). Under Article 80 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) MELOIDAE Gyllenhal, 1810 and NEMOGNATHINAE Cockerell, 1910 (Insecta, Coleoptera): proposed precedence over HORIIDAE Latreille, 1802, and proposed precedence of NEMOGNATHINAE over ZONITIDINAE Mulsant, 1857. (Case 2924). M.A. Bologna & J.D. Pinto.

(2) *Crenitis* Bedel, 1881, *Georissus* Latreille, 1809 and *Oosternum* Sharp, 1882 (Insecta, Coleoptera): proposed conservation. (Case 2925). M. Hansen.

(3) *Trichia* Hartmann, 1840 (Mollusca, Gastropoda) and *Zalasius* Rathbun, 1897 (Crustacea, Decapoda): proposed conservation. (Case 2926). E. Gittenberger & L.B. Holthuis.

(4) *Nygolaimus* Cobb, 1913 (Nematoda): proposed designation of *Dorylaimus brachyuris* de Man, 1880 as the type species. (Case 2927). P.A.A. Loof & J. Heyns.

(5) *Bhatia* Distant, 1908 (Insecta, Homoptera): proposed confirmation of *Eutettix? olivaceus* Melichar, 1903 as the type species. (Case 2929). M.D. Webb.

(6) *Donax serra* Dillwyn, 1817 (Mollusca, Bivalvia): proposed conservation of the specific name. (Case 2930). R.N. Kilburn.

(7) Proposed conservation of the specific names of nine species of southern Afrotropical birds which are junior synonyms. (Case 2931). P.A. Clancey & R.K. Brooke.

(8) CAECILIIDAE Rafinesque-Schmaltz, 1814 (Amphibia, Gymnophiona) and CAECILIIDAE Kolbe, 1880 (Insecta, Psocoptera): proposed removal of the homonymy by the revocation of Opinion 1462 and the adoption of the spelling CAECILIUSIDAE for the psocopteran family name. (Case 2936). M.H. Wake, A. Dubois, D.R. Frost, T.E. Moore & R.A. Nussbaum.

(d) *Ruling of the Commission.* Each Opinion, Declaration or Direction published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin.*

Fourth Edition of the International Code of Zoological Nomenclature

The Commission proposes to publish a new edition of the Code taking into account the large number of possible amendments submitted, many of them in response to a widely circulated invitation published in the *Bulletin* (BZN **46**: 5). Its provisions will supersede those in the current (1985) edition.

A discussion draft of the new edition of the Code is being distributed for comments, and copies will be sent without charge to all subscribers to the *Bulletin* and to members of the American and European Associations for Zoological Nomenclature. Any other institution or individual may order a copy from the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD. The cost of printing and postage is about £3 or US$5. Bank charges on currency exchange make it uneconomic to pay this amount except in sterling or US dollars. The draft of the Code will therefore be sent free of charge, but those able to pay in sterling or US dollars are asked to enclose a cheque for £3 or US$5 to cover the cost.

Before completing the definitive text of the Fourth Edition, the Commission will (in accordance with Article 16 of its Constitution) take into account all comments and suggestions on the draft submitted within one year of its original distribution, but zoologists are asked to send their comments to the Executive Secretary as soon as convenient.

The International Code of Zoological Nomenclature

The Third Edition (published 1985) supersedes all earlier versions and incorporates many changes.

Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., c/o NHB Stop 163, National Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £19 or $35, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £15 or $29; payment should accompany orders.

Official Lists and Indexes of Names and Works in Zoology — Second Supplement to 1990

The Official Lists and Indexes of Names and Works in Zoology was published in 1987. This book gives details of all the names and works on which the Commission has ruled since it was set up in 1895; there are about 9900 entries.

Copies can be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., c/o NHB Stop 163, National Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £60 or $110, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £40 or $75; payment should accompany orders.

In the five years 1986–1990, 946 names and five works were added to the Official Lists and Official Indexes. A supplement has been prepared giving these additional entries, together with some amendments and updatings to entries in the 1987 volume. Copies can be obtained without charge from either of the above addresses.

Bulletin of Zoological Nomenclature — Back Copies

Back copies of all the volumes of the *Bulletin*, and of most volumes of the *Opinions and Declarations* that were published concurrently with vols. 1–16 of the *Bulletin*, are still available. Prices on application to I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.

Bulletin of Zoological Nomenclature — Crustacea and Mollusca Offprints

The International Trust for Zoological Nomenclature is offering a subscription for individual zoologists wishing to receive offprints of all cases in particular disciplines. For an annual payment of £15 or $25 subscribers will receive copies of all Applications, Comments and Opinions relating to either the Crustacea or Mollusca as soon as they are published in the *Bulletin of Zoological Nomenclature*. Offprints are available back to 1980.

Orders for offprints relating to either the Crustacea or the Mollusca should be sent to I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K., with payment at the rate of £15 or $25 for each year requested.

The European Association for Zoological Nomenclature

The European Association for Zoological Nomenclature has been established to facilitate liaison between European zoologists and the Commission, and to support the Commission's work. Members will receive a yearly Newsletter with information on the activities of the Association and Commission, and will be able to buy the *Code* and the *Official Lists and Indexes* at substantial discounts.

The Association's President is Dr V. Mahnert (Switzerland), the Vice-President Dr I.M. Kerzhner (Russia), the Secretary Dr E. Macpherson (Spain) and the Treasurer Dr M.A. Alonso-Zarazaga (Spain). Other members of the Inaugural Council are Dr H.M. André (Belgium), Dr J.-P. Hugot (France), Prof. A. Minelli (Italy) and Dr C. Nielsen (Denmark). Membership of the Association is open to all European zoologists; further details can be obtained from Dr M.A. Alonso-Zarazaga, Museo Nacional de Ciencias Naturales, José Gutiérrez Abascal 2, 28006 Madrid, Spain.

Towards a polynomial system of zoological nomenclature? A response to the proposals of D.S. Yu (1993)

Earle E. Spamer

Academy of Natural Sciences, 1900 Benjamin Franklin Parkway, Philadelphia, Pennsylvania 19103–1195, U.S.A.

Arthur E. Bogan

Freshwater Molluscan Research, 36 Venus Way, Sewell, New Jersey 08080, U.S.A.

Introduction

Yu's 'proposed system for stabilizing the names of species' (BZN **50**: 7–12) was introduced to mitigate the proliferation of 'extra names' for species-group taxa that originate largely from the reassignment of species to genera in which they were not originally named. He proposed an extension of the Linnean system of binomial nomenclature, to accommodate a polynomial name constructed from an immutable original binomen prefixed or interleaved with the name of the genus (and when relevant subgenus and subspecies) in which the organism is now classed. In this way, Yu argued, the taxon's original identity is always recognized and never lost even if there is an error in, or an omission of, the author and date.

In his proposal, Yu used examples from the entomological literature. The particular cases of a taxon with 75 names, including 36 junior synonyms, the 62 identical subspecies names erected by one author over a period of 23 years, or the 13 identical species names erected by one author in one year, are particularly enlightening examples of the potential for taxonomic confusion when organisms are reidentified or synonymized.

It would be a simple matter just to say that complete synonymies provide the information that Yu seeks to preserve. Synonymical lists are not always complete, nor are they always accurate. It would be simple also to suggest that a table be included in all appropriate papers, in which the taxa cited therein are listed with their original binomens. But the publication of Yu's proposal has brought to our minds several points of discussion.

Remarks on the present system

Since 1758, the system of binomial nomenclature in zoology has functioned in the manner it was intended — to provide a name for an organism, within an artificially derived hierarchy. Over more than 230 years biologists have worked within the arbitrary confines of Linné's binomial system. As the result of these centuries' work, synonymies have sometimes become unwieldly, but proper attention to them is a requisite for every revisionary work in biology.

Biologists have always dealt with the inherent problems of reidentification and synonymization in the guidelines of a binomial system. This is not to admit that the system is wholly adequate; Yu's observations on the limitations of binomial nomenclature are valid. The problems are not unique to zoology; the botanical community has developed the *International Code of Botanical Nomenclature* (Greuter

et al., 1988), and the bacteriologists have devised the *International Code of Nomenclature of Bacteria* (Lapage et al., 1975) which rigidly controls its nomenclature with an approved list of bacteriological names and which places controls on valid publication. Nonetheless, all communities practice their different rules within the basic framework of binomial nomenclature. Focusing here on zoology, attention had been drawn by the beginning of the 20th century to the problems of instability in inconsistent uses of nomenclature. The *Règles Internationales de la Nomenclature Zoologique* (1905) were followed by the editions of the *International Code of Zoological Nomenclature* (see the Introduction by W.D.L. Ride in the current *Code* (ICZN, 1985, pp. xiii–xix)).

Remarks on Yu's proposal

1. Yu (p. 7) intended that his proposal was 'to make nomenclature more stable and more applicable to computer-oriented technology without diminishing the very important taxonomic function of the system'. There Yu raised a point which our forebears in biology could not have imagined — computerization. A technology now exists which permits us rapidly to organize data into logically divided categories that can be manipulated by mechanical devices and programmed directions. Here, as with the proliferation of systematic hierarchies, there are potentially as many ways of approaching a problem and manipulating its data as there are people doing the work. Yu has developed one means of dealing with the data he uses — his TAXA program. Here we enter a dangerous area, that of reorganizing the system of taxonomic nomenclature to accommodate a current, but perhaps transient, technology.

The clerical burden of binomial nomenclature, exacerbated by extraordinary situations like those cited by Yu, is amplified by the construction of a computerized database. The problems of correlating reidentified and synonymized binomens with their original binomens become more apparent when these data are divided into the arbitrary categories of a computerized database. In a less than sophisticated computer program, minor aspects such as parentheses become more complex than they should be. Solutions to these problems do exist now through more sophisticated programming, and no doubt procedures will become simpler. Both of us have worked with specialized databases for molluscan taxonomy, and we each have organized our own databases for different subject areas of biological taxonomy. These databases have been customized to accommodate special needs. The data in them are taxonomic and bibliographical; when more advanced computer programs become available we will take advantage of that technology. At this time the problems are those of the operators.

2. Recent years have witnessed the development of 'standard' lists of organisms. These often are the work of committees of biologists who are working within their special disciplines, or who are working at the behest of a governmental or other agency on some aspect of biological monitoring and conservation. Heywood (1991) has discussed the special needs for a stable nomenclature of organisms especially with regard to issues of conservation. His points have become even more well directed in light of the growing number of keys and lists of both biological groups and regional biotas.

Standard lists are not designed to usurp systematic thinking — for there are many different systematic schemes in use at any given time — but they are designed to

provide recognized names for organisms for specific non-taxonomic purposes. They often arbitrarily accept one name instead of another, and for this reason they are inadequate for most works of systematic revision. Many of them also serve as compendia of common names. But the purpose of these lists is similar to the objective of Yu's proposal; the binomial nomenclature is unambiguous. These and other standard lists would be effectively outmoded with the introduction of a polynomial system.

North American workers have devised standard lists of the names of fishes and aquatic invertebrates, coordinated by the American Fisheries Society. These lists are devised to provide stability. It is clear that the scientific details of synonymy and systematic relationships can be relegated to such professionals working on revisions within their respective fields; for most workers, who are under the pragmatic constraints of production schedules and legislative due dates, there is some coördination provided by a standardized — and revisable — nomenclature. Thus far, volumes have been produced for the fishes (Robins et al., 1991), Mollusca (Turgeon et al., 1988; second edition is in review), Decapoda (Williams et al., 1989), and Ctenophora and Cnidaria (Cairns et al., 1991). Volumes on Crustacea (Isopoda, Copepoda, Amphipoda, Cirripedia, Euphausiia), Annelida, Insecta (Plecoptera, Heteroptera, Odonata, Coleoptera), Echinodermata, Porifera, Bryozoa, and other 'miscellaneous' groups are currently in review or in preparation.

To illustrate the widespread availability of what often are prodigeous compilations of Linnean taxonomic names, we cite the standard lists of birds of the world (Sibley & Monroe, 1990), North American butterflies (Miller, 1992), coleopterids of North America north of Mexico (Leng, 1920, and supplements), and the voluminous checklists of coleopterids, organized by family, issued by the U.S. Department of Agriculture. Linnean taxonomy pervades publicly accessible computerized databases, such as those reached through the Internet consortium of computers; e.g. the *Mammal Species of the World* checklist on the Smithsonian Institution's 'Gopher' (nmnhgoph.si.edu 70), extracted from Wilson & Reeder (1993). Each reader probably can add many to our examples.

3. Latin grammar is seen by some workers as an unfortunate aspect of the Linnean system. Changing the spelling of species-group names to agree in gender with the genus name is inconvenient for many workers, and mistakes are often made. An unsophisticated computer program, too, will see a re-spelled species-group name as different, where to a taxonomist it is the same. This is a shortcoming of technology, not one of taxonomy, and should have no bearing upon the construction of a full scientific name.

4. What Yu seeks is a universal language, but such efforts have always failed. Numerical schemes independent of (or in parallel with) names have already been proposed (see Heppell, 1991). Numerical codes have been in use in standard lists (e.g., Leng, 1920, and Sibley & Monroe, 1990), but they supplement the Linnean taxonomic names. Some databases also employ 'serial numbers' which link specific groups of taxonomic data in various ways, but here too they supplement the taxonomic names. Zoologists are not alone in standardizing and numerically coding species; see, for example, the lengthy list of plants of southern Africa edited by Arnold & de Wet (1993). We express concern that computerized databases which incorporate zoological and botanical data will encounter unnecessary procedural

difficulties if they combine the binomial nomenclature of botany with a polynomial one of zoology.

5. Yu (p. 10) brings up the key point of non-taxonomists working with taxonomic names. Such people are the majority in biological work, and Yu validly emphasizes that points of ambiguity which 'may sound trivial to a taxonomist ... are real problems to non-taxonomists'; for example, the use of different genera, the use of parentheses, and the differences of gender endings of specific names. Yu does not mention that even established systematic researchers, especially in the years before the *Règles* and the *Code*, often faltered on these points, so that synonymies are littered with 'sic', 'errore', '(?)', 'non', 'nec', and so on.

In Yu's proposed system, every worker will be required to verify the original binomen if that information is not readily available to them. This will be necessary in order to construct the polynomial scientific name for an organism. These workers, including the non-taxonomists who Yu strives to assist, will have to pore through the literature of previous nomenclature. In most cases they will accept the original binomen as published by someone later than the original author, for example in a later synonymy. Most workers do not have ready access to comprehensive libraries of natural history; they will probably not have a copy of Linné's (1758) *Systema Naturae*, much less Gmelin's (1788 [1792]) revised 13th edition of that work.

Conclusions

Every few years a new system is proposed, or there are discussions on the need for improved stability in taxonomic nomenclature; one has simply to browse through the text and references of Hawksworth (1991) for many examples. Savage (1990) has called for an Official List of Names in Current Use which, if it were to be implemented, would negate the need for Yu's polynomial taxonomy. To our knowledge no one before Yu has proposed a new system of nomenclature which scrambles original and subsequent binomens.

We consider that confusion would result from an implementation of Yu's proposed system of nomenclature. In addition to the binomial system that has been in place since 1758, the literature would (after some arbitrary date set by a future edition of the *Code*) have a second nomenclatural system to take into consideration. Future biological workers would have to decide whether a published binomen was a mere relic of the present system or a non-reclassified species in the polynomial nomenclature of Yu. Every existing database would have to either retrofit to a polynomial taxonomy all of the existing binomial data or it would have to accommodate them in parallel with the new taxonomy. This difficulty erodes the purpose of Yu's proposed system.

Yu has proposed that the original binomen become a part of the full scientific name. He has illustrated (p. 11) his proposed taxonomy with the example (in the binomial taxonomy) of *Togea formosana* Uchida, 1926, which has been reclassified as *Benyllus formosanus* (Uchida, 1926) and as *Stirexephanes signatus formosanus* (Uchida, 1926). In the proposed system, the new polynomens would be, respectively, *Benyllus Togea formosana* Uchida, 1926, and *Stirexephanes signatus Togea formosana* Uchida, 1926. Once the structure of the names is understood, in each case the original binomen is unambiguous. But in each case the original genus takes up a different position in the chain of names, and the subspecific name becomes separated from that

of the species. To put these names into a database requires disassembling the scientific name into both the original binomen and the later classification that is a bi- or trinomen — in the style of Linnean taxonomy!

To change the binomial architecture of nomenclature to provide for more convenient computerization is short-sighted. This technology has been available to biologists for a couple of decades only. We are led by Yu to suppose that restructuring nomenclature to accommodate both current technology and those who do not have need to attend to the details of taxonomy will provide for a less ambiguous taxonomic environment. When the problems addressed in Yu's proposals can be automatically dealt with by more sophisticated (but easy to use) database programming, would biologists then be bound, through some future edition of the *Code*, to Yu's then-unnecessary polynomial nomenclature?

Taxonomy provides the stabilizing nomenclatural hierarchy for systematic research throughout biology. The scientific literature, particularly in recent years, is full of papers that decry the erosion of the importance given to basic systematics in biology. To meddle with nomenclature particularly at this critical time is an additional aspect which should generate concern. Even though we disagree with the specific proposal advanced by Yu, we believe that nomenclatural revision of any kind at this time is unwise. Bisby & Hawksworth (1991) have explored the reasons for the decline of systematics and have come out in clear support of stability through the adoption of a definitive List of Names in Current Usage, and called for 'user-orientated information services for all known organisms'. However, what really is needed is a database of synonymies from all of zoological literature — its core would be Sherborn's *Index Animalium*, Neave's *Nomenclator Zoologicus*, and the *Zoological Record* to date, to which can be added synonymical lists from the literature. The technology exists now to make this aid available, and it permits illustrations to be incorporated. Unfortunately, the funding to bring such a resource into being is not likely to be made available.

References

Arnold, T.H. & Wet, B.C. de. (Eds.). 1993. Plants of southern Africa: names and distribution. *Memoirs of the Botanical Survey of South Africa*, **62**: 1–825.

Bisby, F.A. & Hawskworth, D.L. 1991. What must be done to save systematics? Pp. 323–336 *in* Hawksworth, D.L. (Ed.), 1991.

Cairns, S.D., Calder, D.R., Brinckmann-Voss, A., Castro, C.B., Pugh, P.R., Cutress, C.E., Jaap, W.C., Fautin, D.G., Larson, R.J., Harbison, G.R., Arai, M.N. & Opresko, D.M. 1991. Common and scientific names of aquatic invertebrates from the United States and Canada: Cnidaria and Ctenophora. *American Fisheries Society Special Publications*, **22**: 1–75.

Gmelin, J.F. 1788–[1792]. *Caroli a Linné ... Systema Naturae per regna tria naturae ...* (Tomus I) *Editio decima tertia, aucta, reformata.* Lipsiae.

Greuter, W., Burdet, H.M., Chaloner, W.G., Demoulin, V., Grolle, R., Hawksworth, D.L., Nicolson, D.H., Silva, P.C., Stafleu, F.A., Voss, E.G. & McNeill, J. (Eds.). 1988. *International Code of Botanical Nomenclature* (Regnum Vegetabile, vol. 118). xiv, 328 pp. Koeltz Scientific Books, Königstein, Germany.

Hawksworth, D.L. (Ed.). 1991. *Improving the stability of names: needs and options; proceedings of an international symposium, Kew, 20–23 February 1991.* (Regnum Vegetabile, no. 123). 358 pp. Koeltz Scientific Books, Königstein, Germany.

Heppell, D. 1991. Names without number? Pp. 191–196 *in* Hawksworth, D.L. (Ed.), 1991.

Heywood, V.H. 1991. Needs for stability of nomenclature in conservation. Pp. 53–58 *in* Hawksworth, D.L. (Ed.), 1991.

International Commission on Zoological Nomenclature. 1985. *International code of zoological nomenclature*, 3rd Ed. xx, 338 pp. International Trust for Zoological Nomenclature, London, and University of California Press, Berkeley.

Lapage, S.P., Sneath, P.H.A., Lessel, E.F., Skerman, V.B.D., Seeliger, H.P.R. & Clark, W.A. 1975. *International code of nomenclature of bacteria*, 1975 revision. American Society of Microbiology, Washington, D.C.

Leng, C.W. 1920. *Catalogue of the Coleoptera of America north of Mexico*. 470 pp. Sherman, Mount Vernon, New York. (and supplements, 1927, 1933 (Leng, C.W. & Motchler, A.J.); 1939 (Blackwelder, R.E.); 1948 (Blackwelder, R.E. & Blackwelder, R.M.)).

Linné, C. 1758. *Systema naturae per regna tria natureae . . . .* Tomus I. Editio decima, reformata. 824 pp. Salvii, Holmiae.

Miller, J.Y. 1992. *The common names of North American butterflies*. 192 pp. Smithsonian Institution Press, Washington, D.C.

Neave, S.A. (Ed.). 1939–1993. *Nomenclator zoologicus*, 8 vols. Zoological Society of London, London.

Robins, C.R., Bailey, R.M., Bond, C.E., Brooker, J.R., Lachner, E.A., Lea, R.N. & Scott, W.B. 1991. Common and scientific names of fishes from the United States and Canada. Ed. 5. *American Fisheries Society Special Publications*, **20**: 1–183.

Savage, J.M. 1990. Meetings of the International Commission on Zoological Nomenclature. *Systematic Zoology*, **39**: 424–425.

Sherborn, C.D. 1902–1933. *Index animalium*, 10 vols. British Museum, London.

Sibley, C.G. & Monroe, B.L., Jr. 1990. *Distribution and taxonomy of birds of the world*. 1111 pp. Yale University Press, New Haven.

Turgeon, D.D., Bogan, A.E., Coan, E.V., Emerson, W.K., Lyons, G., Pratt, W.L., Roper, C.F.E., Scheltema, A., Thompson, F.G. & Williams, J.D. 1988. Common and scientific names of aquatic invertebrates from the United States and Canada: mollusks. *American Fisheries Society Special Publications*, **16**: 1–277.

Williams, A.B., Abele, L.G., Felder, D.L., Hobbs, H.H. Jr., Mannin, R.B., McLaughlin, P.A. &. Farfante, I.P. 1989. Common and scientific names of aquatic invertebrates from the United States and Canada: decapod crustaceans. *American Fisheries Society Special Publications*, **17**: 1–77.

Wilson, D.E. & Reeder, D.M. (Eds.). 1993. *Mammal species of the world*. Ed. 2. 1206 pp. Smithsonian Institution Press, Washington, D.C.

Yu, D.S. 1993. A proposed system for stabilizing the names of species, illustrated with reference to the ICHNEUMONIDAE (Hymenoptera). *Bulletin of Zoological Nomenclature*, **50**: 7–12.

Case 2809

Fursenkoina Loeblich & Tappan, 1961 (Foraminiferida): proposed conservation

Stefan A. Revets

Department of Palaeontology, Koninklijk Belgisch Instituut voor Natuurwetenschappen, Vautierstraat 29, B1040 Brussels, Belgium

Abstract. The purpose of this application is to conserve the foraminiferan generic name *Fursenkoina* Loeblich & Tappan, 1961. *Fursenkoina* is a replacement name for *Virgulina* d'Orbigny, 1826, which is a junior homonym. The name *Cassidella* Hofker, 1953 was proposed for a generic concept which makes it a senior synonym of *Fursenkoina*, although its type species has been misidentified in more than one way. The name *Cassidella* has been misunderstood and little used and its suppression is proposed in order to safeguard *Fursenkoina*, which is in wide use and the basis of a family-group name.

---

1. d'Orbigny (1826, p. 267) established the genus *Virgulina* by describing the single new species *V. squammosa* from Pliocene deposits of the Siena region, Italy. No type material can be found among the d'Orbigny material in the Muséum National d'Histoire Naturelle, Paris, which has been extensively recurated and was extensively damaged by flooding of the Seine in 1912. Cushman (1930, p. 63) discussed the provenance of d'Orbigny's foraminifera from Siena, and in a systematic revision (Revets, 1995, in press) of the family BOLIVINITIDAE Cushman, 1927 I intend to designate specimen P 52796 in the Micropalaeontology collection of the Natural History Museum, London as the neotype of *V. squammosa*. The specimen is from Cava Semplice, Coroncina, Siena, Italy.

2. Hofker (1950, p. 68) mentioned the new generic name *Cassidella* and illustrated (fig. 41a) a toothplate, but in the absence of a description or type species designation the name did not become available. Later (1951, p. 264) Hofker described *Cassidella*, but on p. 264 he said that the 'genotype' was *Virgulina tegulata* Reuss, 1846 whereas on p. 265 the new species *C. oligocenica* was given as 'the type of the genus'. The failure to designate a single type species meant that the generic name remained unavailable (Article 13b of the Code). Hofker (p. 266) included *Virgulina squamosa* [sic] d'Orbigny in *Cassidella*, although he did retain *Virgulina* for other species; this is of course incorrect since *V. squammosa* is the type species of *Virgulina* (para. 1 above). On p. 265 he contrasted *Virgulina* (in the sense of the species included by him) and *Cassidella*. Thalmann (1952, p. 971), in a report on the works published in 1951 concerning foraminifera, listed '*Virgulina (Bolivina) tegulata* (Reuss)' as the 'genotype' of *Cassidella*, citing only p. 264 of Hofker (although giving the wrong bibliographic reference); the additional designation of *C. oligocenica* on p. 265 was overlooked. This incomplete and inaccurate citation of Hofker did not make the name

available from Thalmann (1952), although that authorship was accepted by Loeblich (1953, p. 39) despite his remark (p. 40) that the attribution was 'certainly unfortunate'.

3. Hofker (1953a) remedied the lack of valid type designations for the genera introduced in his earlier (1951) work and on p. 26 designated *Virgulina tegulata* Reuss, 1845 (recte 1846) as the type of *Cassidella*; the name thereupon finally became available. He remarked (p. 27) 'I am always in a state of war with the Rules of Nomenclature, since I believe that these rules have added considerably to the confusion in the taxonomy of the foraminifera. This is the reason why I do not always follow them in my publications'. Hofker said of *V. tegulata*: 'Reuss himself reported the species several times from the Turonian as well as from the upper Senonian and Maestrichtian. Yet we now know that these forms appear to be different species. What is the true *Virgulina tegulata* ?'. From this it is not clear on what taxonomic species Hofker (1953a) based his concept of *V. tegulata*. Wood (1954) commented 'Neglect of the elementary principles of nomenclature has made nonsense of the paper [Hofker, 1953a]', and he cast doubt on the classificatory characters which had been used to separate '*Virgulina* (Hofker non d'Orbigny) and *Cassidella* (really *Virgulina*)'.

4. Hofker (1953b) retained *V. squammosa* in *Cassidella*, but an editorial note reported as follows: '*Virgulina squammosa* d'Orbigny, 1826 is the monotypic genotype of *Virgulina* d'Orbigny, 1826, and consequently cannot be removed from *Virgulina* and placed in *Cassidella*. This situation was pointed out to Dr. Hofker, who replied (personal communication, October 1953) that he agreed, and that he now proposes to suppress *Cassidella* as [it is] a synonym of *Virgulina*, restricting the name *Virgulina* to *Virgulina squammosa* and other species having the same wall and toothplate structure. He also plans to establish a new genus for those species which differ from *Virgulina squammosa* ... The new genus will be described in the near future ...'. This plan was never carried out.

5. Loeblich & Tappan (1961, p. 314) proposed the name *Fursenkoina* as a replacement for *Virgulina* d'Orbigny, 1826 (see para. 1 above), which they pointed out was a junior homonym of *Virgulina* Bory de St. Vincent, 1823, the name of a trematode genus. The type species of *Fursenkoina* is automatically (under Article 67h of the Code) that of *Virgulina* d'Orbigny, i.e. *V. squammosa*. Loeblich & Tappan also replaced the subfamily name VIRGULININAE Cushman, 1927 (p. 68) by FURSENKOININAE.

6. Loeblich & Tappan (1964, p. 732; 1987, p. 530) listed *V. tegulata* as the type species of *Cassidella*, although they attributed the genus and type designation to Hofker (1951) rather than to his 1953a paper or to Thalmann (1952) (see paras. 2 and 3 above). In both 1964 and 1987 Loeblich & Tappan treated *Cassidella* and *Fursenkoina* as separate genera on the ground that *V. tegulata* and *V. squammosa* were sufficiently different to merit generic distinction. However, in doing this Loeblich & Tappan relied on information published by Hofker and on their own interpretation of *V. tegulata*, and not on examination of original Reuss material. In 1964 they illustrated (fig. 600, 5 7) examples of '*C. tegulata*' from Arkansas (U.S.A.) and the Netherlands, while in 1987 only the Arkansas specimen which they had identified as *C. tegulata* was illustrated (pl. 578, figs. 26 and 27).

7. The specimens identified by Hofker as *V. tegulata* Reuss and which he included in *Cassidella* were obtained from Maastrichtian chalk of the Jekerdal in Belgium (see Hofker, 1951a, p. 265), whereas Reuss (1846, p. 40) had described his species from the Turonian of Kystra (Czech Republic). Cushman (1937, p. 5) mentioned specimens of *V. tegulata* from other Turonian localities in Central Europe and added that some Cretaceous (Austin and Taylor chalk and marl) specimens from the southern United States 'seem identical with the European species'. The original Reuss material was destroyed in Budapest in 1956 (H. Kollman, pers. comm.). Hofker's specimens of '*V. tegulata*' cannot be traced, but comparison of his description and drawings with Czech specimens of *V. tegulata* shows that Hofker had misidentified his Belgian material. Unfortunately the preservational state of the Turonian material from the Bohemian region precludes description of the taxonomically important features of Reuss's species and hence the satisfactory selection of a neotype for it. Hofker's '*V. tegulata*' was different and clearly congeneric with *V. squammosa* d'Orbigny, as is *Cassidella oligocenica*, the second 'type species' of *Cassidella* (para. 2 above). Hofker himself included both '*V. tegulata*' and *V. squammosa* in *Cassidella*, and this and his explicit statement reported in para. 4 above show that his concept of that genus was the same as that of *Virgulina* d'Orbigny and hence of *Fursenkoina* Loeblich & Tappan.

8. As already mentioned (para. 6), Loeblich & Tappan also misidentified *V. tegulata*, but whereas Hofker cited Belgian material they relied primarily on American specimens. Their distinction between *Cassidella* and *Fursenkoina* was faulty although their taxonomic misidentification was not the same as Hofker's. Article 70b of the Code requires that *Cassidella* should be referred to the Commission because it has a misidentified type species. It would be inappropriate to fix *Virgulina tegulata* Reuss, 1846 as the type species, since the genus was neither originally proposed nor has subsequently been used in that sense, and in any case *V. tegulata* is itself a nomen dubium. The American specimens identified as '*V. tegulata* Reuss' by Loeblich & Tappan (1961, 1964, 1987) and Cushman (1937) probably belong to *Coryphostoma* Loeblich & Tappan, 1962 or to *Loxostomum* Ehrenburg, 1854, so if used in that sense *Cassidella* would be a subjective synonym of one or both of those generic names, both of which are in current use. Although in accord with Hofker's original concept, it would be particularly undesirable to designate either of the originally included nominal species *Virgulina squammosa* or *C. oligocenica* as the type species of *Cassidella* Hofker, 1953, for the name would then be confirmed as a senior synonym of *Fursenkoina* Loeblich & Tappan, 1961. *Cassidella* has been used very little, and only in a confused way. On the other hand *Fursenkoina* is in wide use (see e.g. Haynes, 1981; Loeblich & Tappan, 1987) and as mentioned in para. 5 above it is the basis of a family-group name. In view of its muddled history and particularly to avoid any threat to *Fursenkoina* I propose that the name *Cassidella* should be suppressed.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the name *Cassidella* Hofker, 1953 for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Generic Names in Zoology the name *Fursenkoina* Loeblich & Tappan, 1961 (gender: feminine), type species by monotypy of the replaced nominal genus *Virgulina* d'Orbigny, 1826 *Virgulina squammosa* d'Orbigny, 1826;

(3) to place on the Official List of Specific Names in Zoology the name *squammosa* d'Orbigny, 1826, as published in the binomen *Virgulina squammosa* and as defined by the neotype (specimen P 52796 in the Natural History Museum, London to be designated by Revets (1995)) (specific name of the type species of *Fursenkoina* Loeblich & Tappan, 1961);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Cassidella* Hofker, 1953, as suppressed in (1) above.

References

Cushman, J.A. 1927. An outline of a re-classification of the Foraminifera. *Contributions from the Cushman Laboratory for Foraminiferal Research*, **3**: 1–105.

Cushman, J.A. 1930. On *Uvigerina pigmea* d'Orbigny. *Contributions from the Cushman Laboratory for Foraminiferal Research*, **6**: 62–63.

Cushman, J.A. 1937. A monograph of the subfamily Virgulininae of the foraminiferal family Buliminidae. *Cushman Laboratory for Foraminiferal Research, Special Publication*, no. 9. xv, 228 pp.

Haynes, J.R. 1981. *Foraminifera*. xii, 433 pp. Macmillan, London.

Hofker, J. 1950. Wonderful animals from the sea: Foraminifera. *Amsterdam Naturalist*, **1**: 60–79.

Hofker, J. 1951. The Foraminifera of the Siboga Expedition. Part III. Ordo Dentata, subordines Protoforaminata, Biforaminata, Deuteroforaminata. *Siboga Monograph*, vol. 4a. 513 pp., 34 figs. Brill, Leiden.

Hofker, J. 1953a. Types of genera described in Part III of the 'Siboga Foraminifera'. *The Micropaleontologist*, **7**(1): 26–28.

Hofker, J. 1953b. *Virgulina* and *Cassidella*. *The Micropaleontologist*, **7**(4): 27.

Loeblich, A.R., Jr. 1953. Types of genera described in Part III of the 'Siboga Foraminifera'. *The Micropaleontologist*, **7**(2): 39–42.

Loeblich, A.R., Jr. & Tappan, H. 1961. Suprageneric classification of the Rhizopodea. *Journal of Paleontology*, **35**: 245–330.

Loeblich, A.R., Jr. & Tappan, H. 1964. Sarcodina, chiefly 'Thecamoebians' and Foraminiferida. *In* Moore, R.C. (Ed.), *Treatise on Invertebrate Paleontology*. Part C (Protista 2, vol. 2). 390 pp. Geological Society of America and University of Kansas Press, Lawrence, Kansas.

Loeblich, A.R., Jr. & Tappan, H. 1987. *Foraminiferal genera and their classification*. Vol. 1, 970 pp.; vol. 2, 847 pls. Van Nostrand Reinhold, New York.

Orbigny, A. d'. 1826. Tableau méthodique de la classe des Céphalopodes. *Annales des Sciences Naturelles*, **7**: 245–314.

Reuss, A.E. 1846. *Die Versteinerungen der böhmischen Kreideformation*. 148 pp. Schweizerbart, Stuttgart.

Revets, S.A. 1995 (in press). The systematic study of the Bolivinitidae Cushman, 1927 (Foraminiferida). *Bulletin of the Natural History Museum*, London (*Geology*).

Thalmann, H.E. 1952. Bibliography and index to new genera, species and varieties of Foraminifera for the year 1951. *Journal of Paleontology*, **26**: 953–992.

Wood, A. 1954. *Virgulina* and *Cassidella*. *The Micropaleontologist*, **8**(2): 37.

Case 2848

Chromadora Bastian, 1865 and *Euchromadora* de Man, 1886 (Nematoda): proposed conservation of usage by the designation of *C. nudicapitata* Bastian, 1865 as the type species of *Chromadora*

P.A.A. Loof

Department of Nematology, Wageningen Agricultural University, Postbus 8123, 6700 ES Wageningen, The Netherlands

Abstract. The purpose of this application is to stabilize the existing usage of the names of two genera of aquatic free-living nematodes, *Chromadora* Bastian, 1865 and *Euchromadora* de Man, 1886. *Chromadora* is the type genus of a nominal family and superfamily, and *Euchromadora* of a subfamily. The type species of *Euchromadora* is *Chromadora vulgaris* Bastian, 1865, and according to a long overlooked designation this is also the type species of *Chromadora*. The latter genus is always used in the sense of being typified by *C. nudicapitata* Bastian, 1865 and it is proposed that this be fixed as the type species.

---

1. Bastian (1865, p. 167) described the nematode genus *Chromadora* with nine included species, all free-living in salt water environments. The first two species described, both new, were *C. vulgaris* and *C. nudicapitata*. No type species was designated.

2. De Man (1886, p. 67) described the genus *Euchromadora*, designating as its type species *Chromadora vulgaris* Bastian, 1865. De Man left *C. nudicapitata* in *Chromadora*.

3. In 1905 Stiles & Hassall published a paper on the type species of nematode genera. They had clearly asked Bastian to designate types for his genera, because in each case a type species was given accompanied by the note '... designated by Bastian in letter to Stiles, dated March 22, 1904'; *C. vulgaris* was given as the type of *Chromadora* on p. 94. The designations in this paper of type species for Bastian's genera are referred to with the authorship of Bastian in Stiles & Hassall (1905). It is noteworthy that in each case Bastian designated the species which he had originally mentioned first in the genus (cf. para. 1 above for *Chromadora*).

4. Filipjev (1918, p. 240 footnote) wrote (in translation) '... de Man acted somewhat incorrectly in selecting this species (*vulgaris*), probably the type of the genus *Chromadora* Bastian, 1865, as type of his genus (*Euchromadora*)... But: (1) he acted justifiably, since he removed only *Chr. vulgaris* from the other species of the genus. Thus only this species changed its name: the numerous other species remained in the old genus. (2) Only in 1905 did Bastian definitively designate *Chr. vulgaris* as type of the genus (letter published by Stiles) and this could not have been known by de Man, who described his new genus in 1886. (3) When a type species is not designated by the author of a genus, an author who separates a new genus has the right to designate any species as type of the older genus and his designation is binding. (4) Since *Chr. vulgaris* Bast., which strictly speaking

we should accept as type of the genus, had been removed from it, we should regard *Chr. nudicapitata* Bast., described as second species after *Chr. vulgaris*, as type'.

5. On p. 244 of his paper Filipjev (1918) explicitly gave *C. nudicapitata* as the type species of *Chromadora*, but this designation is invalid since Bastian had designated *C. vulgaris* in 1905 (para. 3 above). Despite this Gerlach & Riemann (1973, p. 304) wrote: 'The previous designation of *Chromadora vulgaris* Bastian, 1865 as type species by Bastian in Stiles & Hassall is a lapsus, because this species had been designated as type species of the genus *Euchromadora* by De Man 1886 p. 66'. This statement by Gerlach & Riemann is contrary to Articles 67k and 69a(ii) of the present Code (and to Article 69 of the then current edition), which make it clear that a species can be the type of more than one genus.

6. *Chromadora* Bastian, 1865 and *Euchromadora* de Man, 1886 are objective synonyms, since *C. vulgaris* is the type species of both by the designations of Bastian (1905) and de Man (1886) respectively. *Euchromadora* has always been used in this sense. However, for more than 75 years (i.e. long before the erroneous statement by Gerlach & Riemann (1973) mentioned in the previous paragraph) *Chromadora* has consistently been used in the sense of Filipjev's designation of *C. nudicapitata* as the type species (see para. 4 above), which had followed de Man's (1886) placement of *C. vulgaris* in *Euchromadora*. *Chromadora* is the type genus of the family CHROMADORIDAE Filipjev, 1917 (p. 27); this is often used at superfamily rank and is the basis of the Order name Chromadorida. *Euchromadora* is the type genus of the subfamily EUCHROMADORINAE Gerlach & Riemann, 1973 (p. 328) within the CHROMADORIDAE.

7. The following are representative references from the systematic literature which illustrate the established usage of the names *Chromadora* and/or *Euchromadora* as typified by *C. nudicapitata* and *C. vulgaris* respectively: Wieser (1954), Coles (1965), de Coninck (1965), Wieser & Hopper (1967), Inglis (1969), Gerlach & Riemann (1973). Further references may be found in their bibliographies and there are many ecological works which use the names in the same sense. In contrast, the designation by Bastian of *C. vulgaris* as the type species of *Chromadora* seems never to have been followed.

8. If the designation of *C. vulgaris* as the type species of *Chromadora* were to be adopted, a most confusing situation would result: the genus known as *Euchromadora* would become *Chromadora* and that known as *Chromadora* would require an entirely new name since there is no synonym. *Chromadora* would not be in the CHROMADORINAE as long understood, and that taxonomic subfamily would have to be renamed. The EUCHROMADORINAE would become the CHROMADORINAE. In the interest of stability it is important that these consequences be avoided.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type species for the nominal genus *Chromadora* Bastian, 1865, and to designate *Chromadora nudicapitata* Bastian, 1865 as the type species;

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Chromadora* Bastian, 1865 (gender: feminine), type species by designation in (1) above *Chromadora nudicapitata* Bastian, 1865;

(b) *Euchromadora* de Man, 1886 (gender: feminine), type species by original designation *Chromadora vulgaris* Bastian, 1865;

(3) to place on the Official List of Specific Names in Zoology the following names:

(a) *nudicapitata* Bastian, 1865, as published in the binomen *Chromadora nudicapitata* (specific name of the type species of *Chromadora* Bastian, 1865);

(b) *vulgaris* Bastian, 1865, as published in the binomen *Chromadora vulgaris* (specific name of the type species of *Euchromadora* de Man, 1886).

References

Bastian, C.H. 1865. Monograph of the Anguillulidae or free nematoids, marine, land, and fresh-water; with descriptions of 100 new species. *Transactions of the Linnean Society of London*, **25**: 73–184.

Coles, J.W. 1965. A critical review of the marine nematode genus *Euchromadora* de Man 1886. *Bulletin of the British Museum (Natural History), Zoology*, **12**(5): 157–194.

Coninck, L.A.P. de. 1965. Systématique des nématodes. Sous-classe des Adenophorea. Pp. 601–731 *in* Grassé, P.-P. (Ed.), *Traité de Zoologie*, vol. 4, fasc. 2 (Némathelminthes (Nématodes)). 731 pp. Masson, Paris.

Filipjev, I.N. 1917. Un nématode libre nouveau de la Mer Caspienne, *Chromadorissa* gen. nov. (Chromadoridae, Chromadorini). *Russkii Zoologicheskii Zhurnal*, **2**: 24–29.

Filipjev, I.N. 1918. Freeliving nematodes from the region of Sevastopol. Part I. *Trudy Osoboi Zoologicheskoi Laboratorii i Sevastopol'skoi Biologicheskoi Stantsii, Rossiiskoi Akademii Nauk'*, **2**: 1–350. [In Russian].

Gerlach, S.A. & Riemann, F. 1973. The Bremerhaven Checklist of aquatic nematodes. I. *Veröffentlichungen des Instituts für Meeresforschung in Bremerhaven*, Supplement **4**(1): 1–404.

Inglis, W.G. 1969. Convergence in the structure of the head and cuticle of *Euchromadora* species and apparently similar nematodes. *Bulletin of the British Museum (Natural History), Zoology*, **17**(5): 151–204.

Man, J.G. de. 1886. *Anatomische Untersuchungen über freilebende Nordsee-Nematoden*. 82 pp., 13 pls. Frohberg, Leipzig.

Stiles, C.W. & Hassall, A. 1905. *The determination of generic types, and a list of roundworm genera, with their original and type species*. 150 pp. U.S. Department of Agriculture, Washington.

Wieser, W. 1954. Reports of the Lund University Chile Expedition 1948–49. 17. Free-living marine nematodes. II. Chromadoroidea. *Lunds Universitets Årsskrift*, (2)**50**(16): 1–148.

Wieser, W. & Hopper, B.E. 1967. Marine nematodes of the East Coast of North America. *Bulletin of the Museum of Comparative Zoology, Harvard University*, **135**: 239–344.

Case 2870

Xerophila geyeri Soós, 1926 (currently *Trochoidea geyeri*; Mollusca, Gastropoda): proposed conservation of the specific name

Edmund Gittenberger

Nationaal Natuurhistorisch Museum, P.O. Box 9517, NL 2300 RA, Leiden, The Netherlands

Abstract. The purpose of this application is to conserve the specific name of *Trochoidea geyeri* (Soós, 1926) for a terrestrial pulmonate snail (family HYGROMIIDAE) from western Europe, which is also found in Pliocene and Pleistocene deposits. The name is in universal usage but is threatened by five senior subjective synonyms which have been unused since publication and for which suppression is proposed. The earlier names are *Helix arceuthophila* and *H. ycaunica*, both of Mabille (1881); *H. vicianica* Bourguignat in Locard, 1882; *H. deana* and *H. pleurestha*, both of Berthier (1884).

---

1. The specific name of *Xerophila geyeri* was established by Soós (1926, p. 98, pl. 5, figs. 1–3) for a terrestrial pulmonate mollusc from near Erfurt in Germany. Material from the type locality is in the Nationaal Natuurhistorisch Museum, Leiden (18 shells numbered 56862).

2. During a revision of parts of Bourguignat's collection, now housed in the Muséum d'Histoire Naturelle, Geneva, I found that the species currently known as *Trochoidea geyeri* (Soós, 1926) was represented by samples of several specimens from France, under various earlier names (see Gittenberger, 1993). These are *Helix arceuthophila* Mabille, 1881 (p. 122; originally described from Fontainebleau, Seine et Marne), *H. ycaunica* Mabille, 1881 (p. 122; from Mailly le Château, Yonne), *H. vicianica* Bourguignat in Locard, 1882 (pp. 106, 331; from between Thiers and Vichy, Allier), *H. deana* Berthier, 1884 (p. 354; from Die, Drôme), and *H. pleurestha* Berthier, 1884 (p. 355; also from Die). The nominal species *arceuthophila*, *ycaunica* and *deana* are each represented in Geneva by a single specimen; *vicianica* and *pleurestha* are each represented by two. The specimens of *H. vicianica* are known to be syntypes and it is possible that specimens of other nominal species are also, having been donated to Bourguignat.

3. All the names were introduced by disciples of the 'Nouvelle École', founded and guided by Bourguignat. Dance (1986, pp. 163–164) commented that the 'Nouvelle École' burdened the molluscan nomenclature with a plethora of ill-conceived new species, based on small variations in shell morphology, since 'every other shell was regarded as potentially new to science'. It is not indicated on the labels in Bourguignat's collection which author collected or donated each specimen; however, the names and localities that are mentioned are identical with those in the original descriptions, and the descriptions fit the shells very well. The names are senior subjective synonyms of *T. geyeri* but have remained unused since their publication.

4. *Trochoidea geyeri* (Soós, 1926) is a widespread inland species with a distribution that is unique in the genus *Trochoidea* Brown, 1827, the many species of which are otherwise concentrated around the Mediterranean. *T. geyeri* is known from the Swedish island of Gotland in the north-east to the Spanish province of Soria in the south-west; most records are from central Europe (see Gittenberger, 1993, pp. 307, 309). The earliest records of the species are from the Pliocene (the Red Crag in Britain and a deposit in the Côte d'Or, France). It had a more widespread and continuous distribution during the cold periods of the Pleistocene than the present disjunct range (see Magnin, 1989) and inhabited south-east England, where it occurred in certain interglacial periods (Bramertonian, Cromerian) and also in many deposits of Late-Glacial age. Generally it disappeared very early in the Postglacial period, as forests spread, but it has been found from a Late Postglacial deposit in Cornwall where it is most common in a layer dated at about 3000 years B.P. (Bronze Age) within coastal sand dunes (see Gittenberger, 1993, p. 306).

5. *Trochoidea geyeri* has frequently been confused with conchologically similar species (see Gitttenberger, 1993, pp. 309 318). These include, in particular, *Helix striata* Müller, 1774 (p. 38; see, for example, Geyer, 1896, p. 30; 1909, p. 44) but the misidentification of this taxon has now been recognised (see Kerney & Cameron, 1979, p. 183; Magnin, 1989, pp. 779, 783). The name *T. geyeri* has remained unchallenged and has been used consistently for a terrestrial pulmonate snail from western Europe, both Recent and fossil (see, for example, the publications of Aparicio, 1986, Falkner, 1990 and Nordsieck, 1993. Gittenberger, 1993, cited 21 works by a number of authors published in the last 50 years in which the name is used. Three further representative references, not cited by Gittenberger, are held by the Commission Secretariat). Adoption of any of the earlier unused names for the taxon (para. 2) would cause unnecessary confusion in the literature and I therefore request that they be suppressed.

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the following specific names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
   (a) *arceuthophila* Mabille, 1881, as published in the binomen *Helix arceuthophila*;
   (b) *ycaunica* Mabille, 1881, as published in the binomen *Helix ycaunica*;
   (c) *vicianica* Bourguignat in Locard, 1882, as published in the binomen *Helix vicianica*;
   (d) *deana* Berthier, 1884, as published in the binomen *Helix deana*;
   (e) *pleurestha* Berthier, 1884, as published in the binomen *Helix pleurestha*;

(2) to place on the Official List of Specific Names in Zoology the name *geyeri* Soós, 1926, as published in the binomen *Xerophila geyeri*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:
   (a) *arceuthophila* Mabille, 1881, as published in the binomen *Helix arceuthophila* and as suppressed in (1)(a) above;
   (b) *ycaunica* Mabille, 1881, as published in the binomen *Helix ycaunica* and as suppressed in (1)(b) above;

(c) *vicianica* Bourguignat in Locard, 1882, as published in the binomen *Helix vicianica* and as suppressed in (1)(c) above;

(d) *deana* Berthier, 1884, as published in the binomen *Helix deana* and as suppressed in (1)(d) above;

(e) *pleurestha* Berthier, 1884, as published in the binomen *Helix pleurestha* and as suppressed in (1)(e) above.

Acknowledgement

Thanks are due to Dr E. Binder, former curator of the mollusc department in the Muséum d'Histoire Naturelle, Geneva, who kindly allowed me to study the Bourguignat collection.

References

Aparicio, M.T. 1986. *The geographic distribution of the family Helicidae in central Spain*. 6 pp. Proceedings of the 8th International Malacology Congress, Budapest, 1983.

Berthier, H. 1884. Hélices inédites de la série de la striata de Müller. *Bulletin de la Société Malacologique de France*, **1**: 353–356.

Dance, S.P. 1986. *A history of shell collecting*. xv, 265 pp., 32 pls. Brill, Leiden.

Falkner, G. 1990. Binnenmollusken. Pp. 112–280 *in* Fechter, R. & Falkner, G., *Weichtiere*. Munich.

Geyer, D. 1896, 1909. *Unsere Land- und Süsswasser-Mollusken. Einführung in die Molluskenfauna Deutschlands. Nebst einem Anhang über das Sammeln der Mollusken*. vi, 85, xii pp., 12 pls. (1896); viii, 155 pp., 18 pls. (1909). Lutz, Stuttgart.

Gittenberger, E. 1993. On *Trochoidea geyeri* (Soós, 1926) and some conchologically similar taxa (Mollusca: Gastropoda Pulmonata: Hygromiidae). *Zoologische Mededelingen*, **67**(19): 303–320.

Kerney, M.P. & Cameron, R.A.D. 1979. *A field guide to the land snails of Britain and north-west Europe*. 288 pp., 24 pls. Collins, London.

Locard, A. 1882. *Prodrome de malacologie Française. Catalogue général des mollusques vivants de France. Mollusques terrestres, des eaux douces et des eaux saumâtres*. vi, 462 pp. Georg, Lyon.

Mabille, J. 1881. Testarum novarum praesertim europaearum diagnoses. *Bulletin de la Société Philomathique de Paris*, (7)**5**: 122–130.

Magnin, F. 1989. Les distributions pléistocène et actuelle de *Trochoidea* (*Xeroclausa*) *geyeri* (Soós, 1926) (Gastropoda, Helicidae) dans le Sud-Est de la France: un exemple de disjonction d'aire liée au réchauffement post-glaciaire. *Bulletin de la Société Géologique de France*, (8)**5**(4): 779–786.

Müller, O.F. 1774. *Vermium terrestrium et fluviatilium ... Testaceorum, non marinorum succincta Historia*, vol. 2. xxxvi, 214 pp. Havniae et Lipsiae.

Nordsieck, H. 1993. Das System der paläarktischen Hygromiidae (Gastropoda: Stylommatophora: Helicoidea). *Archiv für Molluskenkunde*, **122**: 1–23.

Soós, L. 1926. Eine neue *Xerophila* aus Deutschland, *Xer. geyeri*, und anatomische Bemerkungen über *Xer. barcinonensis* (Bgt.). *Archiv für Molluskenkunde*, **58**(2): 96–106.

Case 2862

A.A.H. Lichtenstein's (1796, 1797) *Catalogus musei zoologici ... Sectio tertia. Continens Insecta* and D.H. Schneider's (1800) *Verzeichniss einer Parthei Insekten ...* : proposed suppression, with conservation of some Lichtenstein (1796) names (Insecta and Arachnida)

I.M. Kerzhner

Zoological Institute, Academy of Sciences, St Petersburg 199034, Russia

Abstract. It is proposed that the very rare and usually neglected publications by Lichtenstein (1796, 1797) entitled *Catalogus musei zoologici ... Sectio tertia. Continens Insecta* and by Schneider (1800) entitled *Verzeichniss einer Parthei Insekten* be suppressed for nomenclatural purposes. Despite this, the conservation as from Lichtenstein (1796) is recommended of one generic name (*Solpuga*) and 20 specific names being in general current usage (Insecta and Arachnida).

---

1. At auctions held in Hamburg between 1793 and 1797 there was sold a large collection of animals from all parts of the world belonging to L.F. Holthuizen (also spelled Holthuysen, Holthuisen and Holthuyzen) from Amsterdam (see Engel, 1939, p. 282; Meise & Stresemann, 1950; Weidner, 1967, pp. 43–50).

2. For these auctions Lichtenstein published in three sections (1793, 1794 and 1796) a catalogue, which included many new taxa. The first section (mammals and birds) was reprinted in 1882 and is well known to specialists; a number of names established in it are used as valid names. The second section (molluscs) also contains new names, but seems to be overlooked by malacologists. The third part contains insects and some other arthropods. In this part were established four new generic names (2 Coleoptera, 1 Phasmida, 1 Solifugae) and about 560 new specific names (7 Odonata, 1 Ephemeroptera, 3 Blattodea, 11 Mantodea, 12 Phasmida, 44 Orthoptera, 44 Homoptera, 74 Heteroptera, about 200 Coleoptera, 7 Neuroptera, about 100 Hymenoptera, 30 Lepidoptera, 26 Diptera, 3 Solifugae, 1 Araneae, 1 Crustacea). Most of the specific names were made available by a short description or by reference to figures in works which are not consistently binominal (Stoll, 1780–1788, 1787–1790; Voet, 1766–1806). For about 20 new specific names in Coleoptera Lichtenstein gave references to figures in Olivier (1789–1808). It is very possible that Lichtenstein had the plates from Olivier's work but not the text containing the names; that is certainly so for the plates to Olivier's volume 5, the text of which was published in 1807. Most new names are marked in Lichtenstein (1796) by 'nobis', although the same designation is used by him also for some binomina which are merely new combinations.

3. In 1797 those insects which had not been sold in 1796 were again put up for sale, and for this purpose a new catalogue (Lichtenstein, 1797) was published. It differs from the first edition (1796) in that the items sold in 1796 were omitted (Sherborn, 1899).

4. In 1800 part of D.H. Schneider's collection of insects was auctioned in Stralsund, including a number of specimens originating from Holthuizen's collection

which had been sold in Hamburg. The catalogue published for this auction (Schneider, 1800) contains eight available new specific names (all in Coleoptera) and 19 of Lichtenstein's specific names (in various orders), accompanied by data providing availability. New names are marked by 'n.', 'nob.' or 'm.', and Lichtenstein's names mostly by 'Holth.'.

5. Some later published redescriptions and/or figures of Lichtenstein's (1796) species are based on types or material compared with types (Lichtenstein & Herbst, 1797 — 3 species of *Solpuga*; Herbst, 1797, pp. 10, 11, 13, 21, 25, 28, 177, 180, 185, 193, 201, 265; 1799, pp. 105, 115, 278, 280, 292, 310, 318, 322, 363, 368; 1806, p. 12 — 5 species of *Curculio*, 2 of *Brachycerus*, 5 of *Brentus*, 1 of *Sagra*, 2 of *Pimelia*, 6 of *Cassida*, 2 of *Erotylus* (one of which Lichtenstein placed in *Chrysomela*), 1 of *Elater*; Lichtenstein, 1798 — 1 species of *Locusta*; Weber, 1801, pp. 61, 68, 87, 88, 98-104 — 1 species of *Sagra*, 1 of *Cetonia*, 2 of *Cerambyx*, 2 of *Gryllus*, 10 of *Vespa*; Lichtenstein, 1802 — 12 species of *Phasma*, 8 of *Mantis*). Herbst worked with Holthuizen's collection and knew Lichtenstein's catalogue (see Herbst, 1797, pp. 88, 193; 1799, pp. 323, 325), but he did not cite Lichtenstein's work for the species he redescribed and therefore Lichtenstein's authorship was maintained for only 11 names; the remaining 13 names (four of which are valid) are currently used with Herbst's authorship. Later authors redescribed several species with Lichtenstein's specific names and apparently from his type specimens, but these authors did not refer to Lichtenstein's work and these names have never subsequently been credited to Lichtenstein.

6. Lichtenstein's (1796, 1797) and Schneider's (1800) catalogues are extremely rare, only a few copies being known. Sherborn (1902) listed the names established in them, with some omissions and misprints.

7. For at least three of Lichtenstein's (1796) species the types or specimens compared with them are among specimens received from D.H. Schneider in the Zoological Museum in Berlin (Burmeister, 1835, p. 355 and personal examination), in remnants of C. Stoll's collection in the Museum of Natural History in Leiden (Westwood, 1859, p. 109) and F. Weber's material (Fabricius's collection) in the Zoological Museum in Copenhagen (Zimsen, 1964, p. 119). Although discovery of some other types in these or other collections cannot be excluded, it is clear that most of them are lost.

8. The current usage of Lichtenstein's (1796) generic names is as follows:

Anchyceros Lichtenstein, 1796 (p. 45) (Insecta, Coleoptera, ?CERAMBYCIDAE), type species by monotypy *A. flavicollis* Lichtenstein, 1796. Both the generic and specific names remain unclarified and have not been used later.

Machla Lichtenstein, 1796 (p. 67) (Insecta, Coleoptera, TENEBRIONIDAE), type species by monotypy *M. media* Lichtenstein, 1796 (p. 67); *M. media* is a replacement name and hence a junior objective synonym of *Tenebrio hispidus* Forskål, 1775 (p. 79) (indicated by Lichtenstein as '*Pimelia hispida* F[abricius]'). *Machla* Lichtenstein has never been used as valid. Three other generic names in TENEBRIONIDAE need to be considered in connection with *Machla* Lichtenstein:

(1) *Trachyderma* Latreille, 1829 (p. 7), type species by subsequent designation (Lucas, 1838, p. 50) *Tenebrio hispidus* Forskål, 1775 (p. 79) (as '*Pimelia hispida* de Fabricius');

(2) *Ocnera* Fischer von Waldheim, 1822 (p. 169), type species by subsequent designation (Gebien, 1937, p. 814) *Pimelia imbricata* Fischer von Waldheim, 1820 (pl. 14);

(3) *Machla* Herbst, 1799 (p. 152), type species by subsequent designation (Lucas, 1920, p. 386) *Opatrum villosum* Olivier, 1795 (p. 5).

Machla Lichtenstein, 1796 is, with '*Pimelia hispida* Fabricius' being the only included available nominal species, a senior objective synonym of *Trachyderma* Latreille, 1829, a senior subjective synonym of *Ocnera* Fischer von Waldheim, 1822 (when *Trachyderma* is included in *Ocnera*) and a senior homonym of *Machla* Herbst, 1799. Wilke (1922, p. 260) noted that *Machla* Lichtenstein, 1796 was a senior synonym of *Ocnera* Fischer von Waldheim, 1822 and a senior homonym of *Machla* Herbst, 1799. He established a replacement name *Pseudomachla* for *Machla* Herbst. However all later authors continued to use *Ocnera* (and *Trachyderma*) as valid names (see, for example, Medvedev & Nepesova, 1985, pp. 99, 100), and Koch (1962, p. 119) restored the use of *Machla* Herbst, 1799 as a valid name. If Lichtenstein's catalogue (and hence *Machla* Lichtenstein) is suppressed, the current usage of the other names discussed will be maintained.

Phasma Lichtenstein, 1796 (p. 77) (Insecta, Phasmida, PHASMATIDAE) and its type species, *P. empusa* Lichtenstein, 1796 (p. 77), have already been placed on Official Lists (Opinion 641, September 1962), and under Article 78f are available.

Solpuga Lichtenstein, 1796 (p. 216) (Arachnida, Solifugae, SOLPUGIDAE), type species by subsequent designation (Pocock, 1897, p. 255) *Solpuga chelicornis* Lichtenstein, 1796 (p. 218), is a name in general current usage (concerning misuse of the name *Solpuga* from 1933 to 1981 see Wharton, 1981, p. 62).

9. To the best of my knowledge, only 20 of Lichtenstein's (1796) specific names are currently used as valid, with his authorship, and merit conservation. These are listed in Table I (p. 113) in the current combination and with a reference.

10. A special situation exists with three of Lichtenstein's (1796) species of Orthoptera (TETTIGONIIDAE): *Locusta aurantiaefolia* (p. 82), *L. daedalea* (p. 82) and *L. salviaefolia* (p. 83). In the current literature (Beier, 1960, pp. 285, 325, 355) they are known as '*Cycloptera aurantifolia* [sic] (Stoll, 1787)', '*Typophyllum erosum* (Stoll, 1787)' and '*Diophanes salvifolius* [sic] (Lichtenstein, 1796)'. If Lichtenstein's (1796) work is suppressed, the currently used names or spellings would be retained, but the correct authorship for the first two names would be Houttuyn (1813), since Stoll's part of the work does not contain scientific names, and for the third name would be Lichtenstein (1798).

11. Three of Lichtenstein's (1796) specific names are believed to be senior synonyms but are not used as valid names, 45 are recognised as junior synonyms and 100 are listed as nomina dubia in the subsequent taxonomic literature; lists of these names and references can be provided by me direct or through the Commission Secretariat on request. The remaining 400 or so of Lichtenstein's (1796) names seem never to have been mentioned in the taxonomic literature, and the same is true for all Schneider's (1800) names.

12. It is clear that Lichtenstein's (1796, 1797) and Schneider's (1800) catalogues are a potential source of nomenclatural instability. An examination of names of Heteroptera made by Mr W.R. Dolling (*The Natural History Museum, London, U.K.*) and myself shows that most of Lichtenstein's names based on reference to Stoll's

(1780–1788) figures are interpretable, and about 20 of them are senior synonyms of names in general current usage. A similar situation exists in the Homoptera. It is likely that, in other groups also, the identity of some species can be clarified and some of them will be senior synonyms of currently used names. Furthermore, a number of Lichtenstein's (1796) and two of Schneider's (1800) specific names are senior primary homonyms of names in general current usage.

13. The best solution to this potential nomenclatural instability would be to suppress Lichtenstein's (1796, 1797) and Schneider's (1800) auction catalogues for nomenclatural purposes, but to conserve as from Lichtenstein (1796) two generic and 20 specific names in general current usage.

14. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers:

(a) to suppress for nomenclatural purposes the following works:

(i) Lichtenstein, A.A.H. 1796. *Catalogus musei zoologici ditissimi Hamburgi, d. III. Februar 1796 auctionis lege distrahendi. Sectio Tertia. Continens Insecta*;

(ii) Lichtenstein, A.A.H. 1797. *Catalogus musei zoologici ditissimi Hamburgi, d. 16 Majus 1797 auctionis lege distrahendi. Sectio Tertia. Continens Insecta*;

(iii) Schneider, D.H. 1800. *Verzeichniss einer Parthei Insekten welche am 6ten März 1800 zu Stralsund in öffentlicher Auction einzeln verkauft werden sollen*;

(b) to rule that the generic name *Solpuga* Lichtenstein, 1796 is available despite having been published in a suppressed work;

(c) to rule that the following specific names are available despite having been published in a suppressed work (Lichtenstein, 1796), in combination with the generic name shown in each case:

(i) *caedemadens*, *Cassida*;
(ii) *caperans*, *Brachycerus*;
(iii) *chelicornis*, *Solpuga*;
(iv) *chrysis*, *Lygaeus*;
(v) *chrysothorax*, *Vespa*;
(vi) *coloboptera*, *Vespa*;
(vii) *ephippium*, *Cassida*;
(viii) *ephippium*, *Reduvius*;
(ix) *fatalis*, *Solpuga*;
(x) *filum*, *Mantis*;
(xi) *gnatho*, *Brentus*;
(xii) *haematites*, *Cassida*;
(xiii) *junix*, *Brachycerus*;
(xiv) *neriifolia*, *Locusta*;
(xv) *nitida*, *Cicindela*;
(xvi) *portentosa*, *Acheta*;
(xvii) *purpurea*, *Sagra*;
(xviii) *umbretta*, *Phasma*;
(xix) *v-luteum*, *Cimex*;

(2) to place on the Official List of Generic Names in Zoology the name *Solpuga* Lichtenstein, 1796 (gender: feminine), type species by subsequent designation by Pocock (1897) *Solpuga chelicornis* Lichtenstein, 1796, as conserved in (1)(b) above;

(3) to place on the Official List of Specific Names in Zoology the following names with authorship of Lichtenstein (1796) and first published in combination with the generic name shown in each case, as conserved in (1)(c) above:

(i) *caedemadens*, *Cassida*;
(ii) *caperans*, *Brachycerus*;
(iii) *chelicornis*, *Solpuga* (specific name of the type species of *Solpuga* Lichtenstein, 1796);
(iv) *chrysis*, *Lygaeus*;
(v) *chrysothorax*, *Vespa*;
(vi) *coloboptera*, *Vespa*;
(vii) *ephippium*, *Cassida*;
(viii) *ephippium*, *Reduvius*;
(ix) *fatalis*, *Solpuga*;
(x) *filum*, *Mantis*;
(xi) *gnatho*, *Brentus*;
(xii) *haematites*, *Cassida*;
(xiii) *junix*, *Brachycerus*;
(xiv) *neriifolia*, *Locusta*;
(xv) *nitida*, *Cicindela*;
(xvi) *portentosa*, *Acheta*;
(xvii) *purpurea*, *Sagra*;
(xviii) *umbretta*, *Phasma*;
(xix) *v-luteum*, *Cimex*;

(4) to place on the Official Index of Rejected and Invalid Works in Zoological Nomenclature the following works as suppressed in (1)(a) above:

(a) Lichtenstein, A.A.H. 1796. *Catalogus musei zoologici ditissimi Hamburgi, d. III. Februar 1796 auctionis lege distrahendi. Sectio Tertia. Continens Insecta*;
(b) Lichtenstein, A.A.H. 1797. *Catalogus musei zoologici ditissimi Hamburgi, d. 16 Majus 1797 auctionis lege distrahendi. Sectio Tertia. Continens Insecta*;
(c) Schneider, D.H. 1800. *Verzeichniss einer Parthei Insekten welche am 6ten März 1800 zu Stralsund in öffentlicher Auction einzeln verkauft werden sollen.*

Acknowledgements

I acknowledge with thanks the help of Zara Frenkiel (London), Ursula Göllner-Scheiding and K. Günther (Berlin) in sending me photocopies of the works of Lichtenstein (1796) and Schneider (1800). I am also grateful to A.V. Gorochov, N.Ju. Kluge, B.A. Korotyaev, O.L. Kryzhanovskij (St Petersburg), H. Aspöck (Vienna), L. Borowiec (Wroclaw), W.R. Dolling (London), L.B. Holthuis (Leiden), H. Höltzel (Eppersdorf) and the late D.K.McE. Kevan (Ste Anne de Bellevue, Canada) for consultations.

TABLE I — Lichtenstein's (1796) specific names used currently as valid and with his authorship

Order and Family	*Lichtenstein's name and page*	*Current name*	*Reference*
Coleoptera			
CARABIDAE	*Cicindela nitida* (p. 32)	*Cicindela coerulea nitida*	Schilder, 1953, p. 564
BRENTIDAE	*Brentus gnatho* (p. 53)	*Estenorhinus gnatho*	Damoiseau, 1966, p. 304
CURCULIONIDAE	*Brachycerus junix* (p. 55)	*Brachycerus junix*	Zumpt, 1937, p. 369
	Brachycerus caperans (p. 55)	*Brachycerus caperans*	Pape, 1910, p. 14
CHRYSOMELIDAE	*Sagra purpurea* (p. 60)	*Sagra femorata purpurea*	Gressitt & Kimoto, 1961, p. 11
	Cassida caedemadens (p. 65)	*Agenysa caedemadens*	Blackwelder, 1946, p. 737
	Cassida ephippium (p. 65)	*Stolas ephippium*	Spaeth, 1914, p. 43; Borowiec, in preparation
	Cassida haematites (p. 66)	*Stolas haematites*	Blackwelder, 1946, p. 739
Phasmida			
PHASMATIDAE	*Phasma empusa* (p. 77)	*Phasma empusa*	Opinion 641 (1962)
BACUNCULIDAE	*Phasma umbretta* (p. 78)	*Prexaspes umbretta*	Kirby, 1904, p. 414
Mantodea			
MANTIDAE	*Mantis filum* (p. 81)	*Thesprotia filum*	Giglio-Tos, 1927, p. 273
Orthoptera			
TETTIGONIIDAE	*Locusta neriifolia* (p. 82)	*Pseudophyllus neriifolius*	Beier, 1962, p. 39
GRYLLIDAE	*Acheta portentosa* (p. 85)	*Brachytrupes portentosus*	Chopard, 1967, p. 42
Heteroptera			
PENTATOMIDAE	*Cimex v-luteum* (p. 106)	*Mormidea v-luteum*	Rolston, 1978, p. 208
COREIDAE	*Lygaeus chrysis* (p. 109)	*Sphictyrtus chrysis*	Brailovsky & Meléndez, 1989, p. 29
REDUVIIDAE	*Reduvius ephippium* (pp. 111, 112)	*Heza ephippium*	Maldonado Capriles, 1990, p. 216
Hymenoptera			
VESPIDAE	*Vespa coloboptera* (p. 202)	*Parachartergus colobopterus*	Richards, 1978, p. 212
	Vespa chrysothorax (p. 203)	*Polybia chrysothorax*	Richards, 1978, p. 108
Solifugae			
GALEODIDAE	*Solpuga fatalis* (p. 217)	*Galeodes fatalis*	Kraepelin, 1901, p. 19
SOLPUGIDAE	*Solpuga chelicornis* (p. 218)	*Solpuga chelicornis*	Wharton, 1981, p. 69

References

Beier, M. 1960. Orthoptera, Tettigoniidae (Pseudophyllinae II). *Das Tierreich*, **74**: 1–396.

Beier, M. 1962. Orthoptera, Tettigoniidae (Pseudophyllinae I). *Das Tierreich*, **73**: 1–468.

Blackwelder, R.E. 1946. Checklist of the coleopterous insects of Mexico, Central America, the West Indies, and South America. Part 4. *Bulletin of the United States National Museum*, **185**(4): 551–763.

Brailovsky, H. & Meléndez, V. 1989. Revisión del género *Sphictyrtus* Stål (Hemiptera-Heteroptera-Coreidae-Coreinae-Coreini). *Anales del Instituto de Biología de la Universidad Nacional Autónoma de México* (Zoología), **60**(1): 1–76.

Burmeister, H.C.C. 1835. *Handbuch der Entomologie*, vol. 2, part 1. xii, 396 pp. Enslin, Berlin.

Chopard, L. 1967. Gryllides. Fam. Gryllidae: Subfam. Gryllinae (Trib. Gymnogryllini, Gryllini, Gryllomorphini, Nemobiini). *Orthopterorum Catalogus*, part 10. 211 pp. Junk, 's-Gravenhage.

Damoiseau, R. 1966. La collection de Brentidae du Musée de Moraviae à Brno (Coleoptera-Curculionoidea). *Acta Musei Moraviae. Scientiae Naturales*, **51**: 301–312.

Engel, H. 1939. Alphabetical list of Dutch zoological cabinets and menageries. *Bijdragen tot de Dierkunde*, **27**: 247–346.

Fischer [von Waldheim], G. 1820, 1821, 1822. *Entomographia Imperii Russici*, vol. 1. 25 pls. (1820); Genera Insectorum, 104 pp. (1821); Entomographia Ruthenica, viii, 208 pp. (1822). Semen, Mosquae.

Forskål, P. 1775. *Descriptiones animalium, avium, amphibiorum, piscium, insectorum, vermium, quae in itinere orientali observavit*. 19, xxxiv, 164 pp. Moeller, Havniae.

Gebien, H. 1937. Katalog der Tenebrioniden (Col. Heteromera). Part 1. *Pubblicazioni del Museo Entomologico 'Pietro Rossi' Duino*, **2**: 505–883.

Giglio-Tos, E. 1927. Orthoptera, Mantidae. *Das Tierreich*, **50**: 1–707.

Gressitt, J.L. & Kimoto, S. 1961. The Chrysomelidae (Coleopt.) of China and Korea. Part 1. *Pacific Insects Monograph*, **1A**: 1–299.

Herbst, J.F.W. 1797, 1799, 1806. *Natursystem aller bekannten in- und ausländischen Insekten. Käfer*. Vol. 7, xi, 346 pp., 26 pls. (1797); vol. 8, xvi, 420 pp., 24 pls. (1799); vol. 10, viii, 285 pp., 18 pls. (1806). Pauli, Berlin.

Kirby, W.F. 1904. *A synonymic catalogue of Orthoptera*, vol. 1. 501 pp. British Museum, London.

Koch, C. 1962. Analysis of the Madagascan components of the subfamily Tentyriinae (Tenebrionidae, Coleoptera) with revisions of the generic systematics of the Asidini from Africa south of the Sahara and the African, Asiatic and Palaearctic Epitragina of Tentyriini. *Mémoires de l'Institut Scientifique de Madagascar*, Entomologie, **13**: 1–146.

Kraepelin, K. 1901. Palpigradi und Solifugae. *Das Tierreich*, **12**: 1–159.

Latreille, P.A. 1829. Cuvier's *Le Règne Animal*, Ed. 2, vol. 4. xxvii, 584 pp. Déterville, Paris.

Lichtenstein, A.A.H. 1793. *Catalogus rerum naturalium rarissimarum Hamburgi, d XXI. Octobr. 1793 Auctionis lege distrahendarum. Sectio Prima. Continens Mammalia & Aves*. 60 pp. Schniebes, Hamburg.

Lichtenstein, A.A.H. 1794. *Catalogus rerum naturalium rarissimarum Hamburgi, ... 1794 auctionis lege distrahendarum. Sectio Secunda. Continens ...* . Hamburg. [Not seen].

Lichtenstein, A.A.H. 1796. *Catalogus musei zoologici ditissimi Hamburgi, d. III. Februar. 1796 auctionis lege distrahendi. Sectio Tertia. Continens Insecta*. 13, 224 pp. Schniebes, Hamburg.

Lichtenstein, A.A.H. 1797. *Catalogus musei zoologici ditissimi Hamburgi, d. 16 Majus 1797 auctionis lege distrahendi. Sectio Tertia. Continens Insecta*. 6, 156 pp. Harmson Witwe, Hamburg.

Lichtenstein, A.A.H. 1798. Essay on the eye-like spot in the wings of the Locustae of Fabricius, as indicating the male sex. *Transactions of the Linnean Society*, London, **4**: 51–62.

Lichtenstein, A.A.H. 1802. A dissertation on two natural genera hitherto confounded under the name of *Mantis*. *Transactions of the Linnean Society*, London, **6**: 1–39.

Lichtenstein, A.A.H. 1882. *Lichtenstein's Catalogus rerum naturalium rarissimarum*. iv, 60 pp. Willughby Society, London.

Lichtenstein, A.A.H. & Herbst, J.F.W. 1797. *Naturgeschichte der Insekten-Gattungen Solpuga*

und Phalangium. viii, 88 pp. Lange, Berlin. [Forms 'Heft 1' of Herbst, *Natursystem der ungeflügelten Insekten*].

L[ucas], H. 1838. Piméliaires. Pp. 49–55 (Livraison 566–567) *in*: *Dictionnaire Pittoresque d'Histoire Naturelle*, vol. 8 (PIE-SCO). 640 pp. Paris.

Lucas, R. 1920. *Catalogus alphabeticus generum et subgenerum Coleopterorum orbis terrarum totius (famil., trib., subtr., sect. incl.)*, part 1. xxxi, 696 pp. Nicolaische Verlags-Buchhandlung R. Stricker, Berlin.

Maldonado Capriles, J. 1990. *Systematic catalogue of the Reduviidae of the World (Insecta: Heteroptera)*. x, 694 pp. University of Puerto Rico, Mayaguez.

Medvedev, G.S. & Nepesova, M.G. 1985. *Keys to the identification of the darkling beetles of Turkmenistan*. 178 pp. Ylym, Ashkhabad. [In Russian].

Meise, W. & Stresemann, E. 1950. Notes on South African birds described in A. Lichtenstein's 'Catalogus', 1793. *Ibis*, **92**: 22–26.

Olivier, A.G. 1789–1808. *Entomologie, ou histoire naturelle des insectes. Coléoptères*, 6 vols. Vol. 3 (1795); vol. 5 (1807). Baudouin (later Lanneau, Desray), Paris.

Pape, P. 1910. Brachyceridae. *In* Junk, W. & Schenkling, S., *Coleopterorum Catalogus*, part 16. 36 pp. Junk, Berlin.

Pocock, R.I. 1897. On the genera and species of tropical African Arachnida of the order Solifugae, with notes upon the taxonomy and habits of the group. *Annals and Magazine of Natural History*, (6)**20**: 249–272.

Richards, O.W. 1978. *The social wasps of the Americas excluding the Vespinae*. 580 pp., 4 pls. British Museum (Natural History), London.

Rolston, L.H. 1978. A revision of the genus *Mormidea* (Hemiptera: Pentatomidae). *Journal of the New York Entomological Society*, **86**: 161–219.

Schilder, F.A. 1953. Studien zur Evolution von *Cicindela*. *Wissenschaftliche Zeitschrift der Martin-Luther-Universität Halle-Wittenberg, Mathematisch-Naturwissenschaftliche Reihe*, 3(2): 539–576.

Schneider, D.H. 1800. *Verzeichniss einer Parthei Insekten, welche am 6ten März 1800 zu Stralsund in öffentlicher Auktion einzeln verkauft werden sollen*. 23 pp.

Sherborn, C.D. 1899. Lichtenstein's 'Catalogus rerum naturalium'. *Annals and Magazine of Natural History*, (7)**3**: 272.

Sherborn, C.D. 1902. *Index Animalium*, sect. 1 (1758–1800). lix, 1195 pp. Cambridge University Press, Cambridge.

Spaeth, F. 1914. Chrysomelidae: 16. Cassidinae. *Catalogus Coleopterorum*, part 62. 182 pp. Junk, Berlin.

Stoll, C. 1780–1788. *Natuurlyke en naar't Leeven naauwkeurig gekleurde Afbeeldingen en Beschryvingen der Cicaden en Wantzen*. Cicaden, 124 pp., 29 pls.; Wantzen, 172 pp., 41 pls. Sepp, Amsterdam.

Stoll, C. 1787–1790. *Natuurlijke en naar het Leven nauwkeurig gekleurde Afbeeldingen en Beschrijvingen der spoken, wandelende bladen, zabel-springhanen, krekels, trek-springhanen en kakkerlakken*. Spectres, Lief. 1–4, 36 pp., 18 pls.; Locustes, Lief. 1, 16 pp., 6 pls. Sepp, Amsterdam. [Continuation of the work, including all indexes, published by M. Houttuyn in 1813].

Voet, J.E. 1766–1806. *Catalogus systematicus Coleopterorum*. 2 vols. Bakhuysen, Haag.

Weber, F. 1801. *Observationes entomologicae, continentes novorum quae condidit generum characteres, et nuper detectarum specierum descriptiones*. xii, 116 pp. Universität, Kiliae.

Weidner, H. 1967. Geschichte der Entomologie in Hamburg. *Abhandlungen und Verhandlungen des Naturwissenschaftlichen Vereins in Hamburg*, (N.F.)**9** supplement: 1–387.

Westwood, J.O. 1859. *Catalogue of orthopterous insects in the collection of the British Museum. Part I. Phasmidae*. 195 pp., xl, 8 pls. British Museum, London.

Wharton, R.A. 1981. Namibian Solifugae (Arachnida). *Cimbebasia*, **5**: 1–87.

Wilke, S. 1922. Beiträge zur Systematik und geographischen Verbreitung ungeflügelter Tenebrioniden (Unterfam. Asidinae). *Archiv für Naturgeschichte*, (A)**87**(12): 248 312.

Zimsen, E. 1964. *The type material of I.C. Fabricius*. 656 pp. Munksgaard, Copenhagen.

Zumpt, F. 1937. Curculioniden-Studien XXVII. Revision der paläarktischen *Brachycerus*-Arten. *Entomologische Blätter*, **33**: 348–374, 385–426.

Case 2929

Bhatia Distant, 1908 (Insecta, Homoptera): proposed confirmation of *Eutettix*? *olivaceus* Melichar, 1903 as the type species

M. D. Webb

The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.

Abstract. The purpose of this application is to confirm *Eutettix*? *olivaceus* Melichar, 1903 as the type species of the leafhopper genus *Bhatia* Distant, 1908. Distant (1908) was in fact dealing not with *E. olivaceus* but with a still unnamed closely related species when describing *Bhatia*, but no instability will result from the confirmation of *E. olivaceus* as the type species.

---

1. The genus *Bhatia* Distant (1908, p. 357, fig. 227) was established for the nominal species *Eutettix*? *olivaceus* Melichar, 1903 (p. 191, pl. 6) from Sri Lanka. Recent studies show that the holotype of *E. olivaceus* (in the Moravian Museum, Brno, Czech Republic) is a different species from that used by Distant (1908) for his generic description of *Bhatia*. Distant's specimens, in the Natural History Museum, London, represent a new species of *Bhatia* currently being described (Zhang & Webb, in preparation).

2. Since Distant (1908) two further misidentifications of *Bhatia olivaceus* have been made by Ishihara (1961, p. 243) and by Linnavuori & Al-Ne'amy (1983, p. 22), both providing figures which are identifiable as *Omanella johnsoni* Merino, 1936 (p. 363). A further description by Singh-Pruthi (1934) of '*B. olivacea*' cannot be positively attributed to either *B. olivacea* or the new species. Linnavuori & Al-Ne'amy (1983, p. 21) proposed a tribe BHATIINI, based on their misidentification of *B. olivacea* (Melichar). At present this poses no problem since *O. johnsoni* is referable to the BHATIINI, and furthermore the name BHATIINI is a junior synonym of PARABOLOPONINI Ishihara, 1953 (p. 5) (Zhang & Webb, in preparation).

3. This case is referred to the Commission under Article 70b of the Code. I consider that stability would best be served by the simple course of retaining *Eutettix*? *olivaceus* Melichar, 1903 as the type species of *Bhatia* Distant, 1908.

4. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to confirm that the type species of *Bhatia* Distant, 1908 is *Eutettix*? *olivaceus* Melichar, 1903;

(2) to place on the Official List of Generic Names in Zoology the name *Bhatia* Distant, 1908 (gender: feminine), type species by monotypy *Eutettix*? *olivaceus* Melichar, 1903, as confirmed in (1) above;

(3) to place on the Official List of Specific Names in Zoology the name *olivaceus* Melichar, 1903, as published in the binomen *Eutettix*? *olivaceus* (specific name of the type species of *Bhatia* Distant, 1908).

References

Distant, W.L. 1908. *The fauna of British India including Ceylon and Burma*, vol. 4 (Rhynchota). 501 pp., 282 figs. Taylor & Francis, London.

Ishihara, T. 1953. A tentative check list of the superfamily Cicadelloidea of Japan (Homoptera). *Scientific Reports of the Matsuyama Agricultural College*, **11**: 1–72.

Ishihara, T. 1961. Homoptera of Southeast Asia collected by the Osaka City University Biological Expedition to Southeast Asia 1957–1958. *Nature and Life in Southeast Asia*, **1**: 225–257.

Linnavuori, R.E. & Al-Ne'amy, K.T. 1983. Revision of the African Cicadellidae (subfamily Selenocephalinae) (Homoptera, Auchenorrhyncha). *Acta Zoologica Fennica*, **168**: 1–105.

Melichar, L. 1903. *Homopteren-Fauna von Ceylon*. 248 pp., 6 pls. Dames, Berlin.

Merino, G. 1936. Philippine Cicadellidae (Homoptera). *Philippine Journal of Science*, **61**(3): 307–400.

Singh-Pruthi, H. 1934. Studies on the Indian Jassidae (Homoptera). *Memoirs of the Indian Museum*, **11**(2): 69–99.

Zhang, Y. & Webb, M.D. (In preparation). A generic revision of the Asian and Pacific Selenocephaline leafhoppers (Homoptera: Cicadellidae). *Bulletin of the Natural History Museum*, London (*Entomology*).

Case 2890

Rhopalosiphum monardae Davis, 1911 (currently *Hyalomyzus monardae*; Insecta, Homoptera): proposed conservation of the specific name

David J. Voegtlin

Center for Biodiversity, Illinois Natural History Survey, 607 E. Peabody, Champaign, Illinois 61820–6970, U.S.A.

Abstract. The purpose of this application is to conserve the specific name of the North American aphid *Rhopalosiphum monardae* Davis, 1911. This is threatened by the senior subjective synonym *Phorodon scrophulariae* Thomas, 1879, which has not been used in primary literature since 1903.

---

1. Thomas (1879, p. 72) described *Phorodon scrophulariae* from a number of wingless individuals which had been collected in 'the vicinity of Carbondale, Illinois' by a Miss Middleton, who identified the host as *Scrophularia nodosa*. Thomas was apparently not convinced of the identity of the host as at the end of his description he wrote: 'Note. — The plant on which this species was found was immature, it was supposed to be *S. nodosa*, but there is reason to doubt this, and the matter cannot be decided until next season'.

2. The name *Phorodon scrophulariae* has been used a number of times. Clarke (1903, p. 252) listed the species as occurring on *Scrophularia* sp. in Berkeley, California. Sanborn (1906, p. 249) included it in a host list of North American aphids in a paper on Kansas APHIDIDAE; this was not a primary citation and he gave no reference for its occurrence in Kansas. Swain (1919, p. 80) referred to *Phorodon scrophulariae* as a 'doubtful species' and noted that multiple searches on *Scrophularia* spp. at Stanford, Riverside and San Diego, California had failed to find this aphid. Swain (p. 2) recorded that most of Clarke's material had been destroyed in the 1906 San Francisco earthquake so it was not possible to determine the identity of his material from *Scrophularia*. Hottes & Frison (1931, p. 343) described Thomas's slide (no. 2798 in the collection of the Illinois Natural History Survey) containing one identifiable female specimen of *Myzus scrophulariae*, one incomplete specimen in balsam outside the coverslip (possibly *scrophulariae*) and one specimen of a second species. Although Thomas's original description referred to several specimens, no additional material has been located in the collection of the Illinois Natural History Survey or elsewhere. Mason (1940, p. 19) included this species in his revision of the *Myzus* spp. of North America. His description is based solely on the type specimen and he added the following comment: 'With the exception of one record from California by Clark (1903, p. 252), this species has not been reported since it was originally described'. Smith & Parron (1978, p. 210) listed California, Illinois and Kansas as the distribution for *Myzus scrophulariae*, but presumably based the Kansas occurrence on Sanborn's secondary citation.

3. In a paper on the APHIDIDAE of Nebraska, Williams (1910, p. 89) used the name '*Phorodon monardae* n. sp.', adding the words 'No description. Type from Ashland, May 24, 1890, on *Monarda fistulosa*, in collection of University of Nebraska, no. 160'. Under Article 12c of the Code the mention of host, label or specimen does not constitute a description, definition or indication such as is necessary for the availability of a name; it follows that *Phorodon monardae* Williams is a nomen nudum. The name *Rhopalosiphum monardae* was made available by Davis (1911, p. 36), who attributed authorship to Williams and gave a detailed description of the winged female type specimen. Mason (1940, p. 14) corrected authorship to Davis as *Myzus monardae* (Davis). The species was transferred without comment to *Hyalomyzus* by Eastop & Hille Ris Lambers (1976, p. 219).

4. *Hyalomyzus monardae* is known only from North America. It has been found in Colorado, Illinois, Idaho, Nebraska, New York and Utah in the United States and Manitoba and New Brunswick in Canada. Citations are Davis (1911, p. 36), Hottes & Frison (1931, p. 343), Mason (1940, p. 14), Palmer (1952, p. 339), Gittins et al. (1976, p. 20); Eastop & Hille Ris Lambers (1976, p. 219), Smith (1982, p. 330), Knowlton (1983, p. 44), Voegtlin (1984, p. 569), Eastop & Voegtlin (1990, p. 117), Robinson & Lamb (1991, p. 8). All records are from *Monarda* spp. with the exception of Knowlton who recorded it from peppermint and horsemint, *Agastache*.

5. Eastop & Voegtlin (1990, p. 117) figured the original specimen (see para. 2 above) of *Phorodon scrophulariae*, describing it as the lectotype, and stated that the name was a synonym of *Hyalomyzus monardae*. *Phorodon scrophulariae* is known only from this one specimen in the collection of the Illinois Natural History Survey. The name has remained unused in primary literature since Clarke (1903), which is the only primary citation other than Thomas's original description (1879). It would be confusing and misleading to replace the well-known and appropriate name *monardae* with the long unused and inappropriate name *scrophulariae* for an aphid which is now known to occur mainly on *Monarda* spp.

6. The International Commision on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the specific name *scrophulariae* Thomas, 1879, as published in the binomen *Phorodon scrophulariae*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Specific Names in Zoology the name *monardae* Davis, 1911, as published in the binomen *Rhopalosiphum monardae*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *scrophulariae* Thomas, 1879, as published in the binomen *Phorodon scrophulariae* and as suppressed in (1) above.

References

Clarke, W.T. 1903. A list of California Aphididae. *Canadian Entomologist*, **35**: 247–254.

Davis, J.J. 1911. Williams' 'The Aphididae of Nebraska'; a critical review. *University of Nebraska Studies*, **11**(3): 253–291.

Eastop, V.F. & Hille Ris Lambers, D. 1976. *Survey of the world's aphids*. 573 pp. Junk, The Hague.

Eastop, V.F. & Voegtlin, D.J. 1990. Taxonomic notes on some North American aphids. *Proceedings of the Entomological Society of Washington*, **92**(1): 115–119.

Gittins, A.R., Bishop, G.W., Knowlton, G.F. & Parker, E.J. 1976. An annotated list of the aphids of Idaho (Homoptera: Aphidae). *Idaho Agricultural Experiment Station Research Bulletin*, **95**: 1–47.

Hottes, F.C. & Frison, T.H. 1931. The plant lice, or Aphiidae of Illinois. *Bulletin of the Illinois State Natural History Survey*, **19**: 121–447.

Knowlton, G.F. 1983. Aphids of Utah. An annotated list — Homoptera: Aphididae. *Utah State University Research Bulletin*, **509**: 1–155.

Mason, P.W. 1940. A revision of the North American aphids of the genus *Myzus*. *United States Department of Agriculture Miscellaneous Publications*, **371**: 1–30.

Palmer, M.A. 1952. Aphids of the Rocky Mountain region. *The Thomas Say Foundation*, **5**: 1–452.

Robinson, A.G. & Lamb, R.J. 1991. Aphids of Manitoba. *Agriculture Canada Research Branch, Technical Bulletin*, **1991**(7E): 1–29.

Sanborn, C.E. 1906. Kansas Aphididae. With catalogue of North American Aphididae and host-plant and plant-host list, Part II. *Kansas University Science Bulletin*, **3**(8): 225–275.

Smith, C.F. 1982. A key to the species in *Hyalomyzus* (Homoptera: Aphididae) in North America, with the description of a new species. *Proceedings of the Entomological Society of Washington*, **84**(2): 325–331.

Smith, C.F. & Parron, C.S. 1978. An annotated list of Aphididae (Homoptera) of North America. *North Carolina Agricultural Experiment Station, Technical Bulletin*, **255**: 1–428.

Swain, A.F. 1919. A synopsis of the Aphididae of California. *University of California Publications, Technical Bulletins (Entomology)*, **3**(1): 1–221.

Thomas, C. 1879. Noxious and beneficial insects of the State of Illinois. *Third Annual Report of the State Entomologist of Illinois*, **8**: 1–212.

Voegtlin, D.J. 1984. A new species of *Hyalomyzus* (Homoptera: Aphididae) from *Hypericum prolificum* in Illinois. *Proceedings of the Entomological Society of Washington*, **86**(3): 563–571.

Williams, T.A. 1910. The Aphididae of Nebraska. *University of Nebraska Studies*, **10**(2): 85–175.

Case 2878

Scarabaeus rufus Moll, 1782 (currently *Aphodius rufus*), *Scarabaeus rufus* Fabricius, 1792 (currently *Aegialia rufa*) and *Scarabaeus foetidus* Herbst, 1783 (currently *Aphodius foetidus*) (Insecta, Coleoptera): proposed conservation of usage of the specific names

Frank-Thorsten Krell

Eberhard-Karls-Universität, Zoologisches Institut, Lehrstuhl für Spezielle Zoologie, Auf der Morgenstelle 28, D-72076 Tübingen, Germany

Zdzisława Stebnicka

Polish Academy of Sciences, Institute of Systematics and Evolution of Animals, ul. Sławkowska 17, PL-31-016 Krakow, Poland

Erik Holm

University of Pretoria, Faculty of Science, Department of Entomology, 0002 Pretoria, South Africa

Abstract. The purpose of this application is to conserve the specific names of the scarab beetles *Scarabaeus rufus* Moll, 1782 and *S. rufus* Fabricius, 1792, which are junior primary homonyms of *S. rufus* De Geer, 1778. Despite their homonymy all three specific names have been used since publication and are currently in use; they have not been considered congeneric for 150 years. It is proposed that the name *S. scybalarius* Fabricius, 1781, a senior subjective synonym of *S. rufus* Moll which, through misidentification, has been used for the taxon correctly called *S. foetidus* Herbst, 1783, should be suppressed. *Dischista rufa* (De Geer) is a well known and widely distributed African species of the subfamily CETONIINAE. The larvae have been found in rhinoceros dung; the adults never feed on dung but on fruit and flowers and are a common pest in beehives. A lectotype is designated. *Aphodius* (*Agrilinus*) *rufus* (Moll) and *Aphodius* (*Aphodius*) *foetidus* Herbst (subfamily APHODIINAE) are European species, frequently found in mammal dung. *Aegialia rufa* (Fabricius, 1792) (subfamily AEGIALIINAE or APHODIINAE, tribe AEGIALIINI) is also European and has been introduced into the U.S.A. and Canada; it is psammobiontic and littoral, mostly found in plant debris.

---

1. De Geer (1778, pp. 640, 946, pl. 48, fig. 1) described and figured *Scarabaeus rufus*. The species was transferred to *Cetonia* Fabricius, 1775 by Schönherr (1817, p. 124) and has been cited under five further generic names; it has lately been placed (see Holm & Marais, 1992, p. 224) in *Dischista* Burmeister, 1842 (MELOLONTHIDAE, CETONIINAE or SCARABAEIDAE, CETONIINAE). The species has been treated as valid since Kraatz's work (1883, p. 27). All authors writing after 1921 have considered De Geer's name to be a senior synonym of *Cetonia carmelita* Fabricius, 1787, *Pachnoda carbonaria* Gory & Percheron, 1833 and *P. frenata* Burmeister, 1847. Holm & Marais

(1992, p. 224) recorded that type material of *S. rufus* had not been traced. However, two specimens have been found in the De Geer collection in the Naturhistoriska Riksmuseet, Stockholm, and one of us (E. Holm) hereby designates one of these as the lectotype. It is a male bearing the labels:

(1) (square orange label without writing);
(2) 'Types *Scarabaeus rufus* de Geer' (white elongate modern label, handwriting of P. Lindskog);
(3) 'Lectotype, *Scarabaeus rufus* de Geer, des. E. Holm' (white label with red margin and printing).

The second (paralectotype) specimen is female and labelled:

(1) 'Sp.' (square antiquated white label with quill writing);
(2) 'Paralectotype, *Scarabaeus rufus* de Geer, des. E. Holm 1993' (white label with red margin and printing).

The usage of *rufus* De Geer has never been challenged.

2. Fabricius (1781, p. 16) described *Scarabaeus scybalarius*. Illiger (1798, p. 33) included the species in his new genus *Aphodius* (p. 15) (SCARABAEIDAE, APHODIINAE) where it has remained. The lectotype, designated by Landin (1956, p. 214), is in the Banks Collection in the Natural History Museum, London. Moll (1782, p. 372) described the same taxon as *Scarabaeus rufus* and Creutzer (1799, p. 51) placed this in *Aphodius*. No types for Moll's nominal species are known (see M. Dellacasa, 1988, p. 192). Authors in nearly all fundamental works on the systematics of the SCARABAEIDAE in the 19th and 20th centuries have used the name *A. rufus* (Moll) and not *scybalarius* Fabricius, and have erroneously used '*Aphodius scybalarius* (Fabricius)' for Herbst's (1783, p. 7, pl. 19, fig. 6) species *Scarabaeus foetidus*.

3. The synonymy between the names *Scarabaeus scybalarius* Fabricius and *S. rufus* Moll was pointed out by Landin (1956) on the basis of a study of Fabricius's type material in the Zoological Museum, Kiel and the Natural History Museum, London (Banks Collection). Landin (1956, pp. 213, 225) proposed that *foetidus* should be re-instated in place of *scybalarius* auctt. (nec Fabricius, 1781) as the correct specific name for the taxon, but that the usage of *rufus* Moll should be conserved for the species which Fabricius had called *scybalarius*. Landin (1956, p. 213) commented: 'The priority belongs to Fabricius' specific name *scybalarius* (1781) before *rufus* Moll (1782). Here an application of the rule of priority would consequently mean that the name of *scybalarius* would be transferred from one common species to another quite as widespread one, and that the name of *rufus*, which has been used for a long time, would altogether disappear in the synonymy, which is already difficult to survey, and I am quite convinced that such a measure would never come to be commonly applied'. Landin realised that *Scarabaeus rufus* Moll was a junior primary homonym and (1957a, pp. 110–111) noted: 'De Geer already in 1778 described a *Scarabaeus rufus*, belonging to another subfamily and taken from '*Scarabaeus*' long before the homonymy was discovered ... In my opinion, to reject the name of *rufus* Moll, which has been used in the practical treatments of the species for such a long time, is not to take a realistic view of the nomenclatorial problems. As a matter of fact ... the species should be called *Aphodius scybalarius* (Fabricius, 1781), a name which has always been wrongly used for quite another species. The confusion would thus be even more augmented. As it is quite clear that any change of the name *Aphodius rufus* (Moll)

must involve great nomenclatorial chaos, I propose the preservation of the name'. However, Landin did not submit an application to the Commission.

4. The name *Aphodius rufus* (Moll) has been used in the publications of Endrődi (1956, pp. 51, 179), Panin (1957, p. 186), Landin (1957b, p. 94), Klefbeck & Sjöberg (1960, p. 176), Janssens (1960, pp. 173–174), Balthasar (1964, pp. 402, 405), Baguena Corella (1967, p. 134), Machatschke (1969, pp. 325–326), Stebnicka (1976, pp. 21, 115, 419, figs. 433, 434), Pope (1977, p. 45) and Jessop (1986, pp. 23, 25). Introduction of *A. scybalarius* as the name for the taxon would inevitably lead to confusion for all who use these standard works, particularly as the name has been mostly used in a different sense (paras. 2, 3 and 6), and unfortunately this has sometimes occurred. Silfverberg (1977, p. 91; 1979, p. 32; 1992, p. 38), G. Dellacasa (1983, p. 149), Lundberg & Gustafsson (1986), Martin Piera, Veiga & Lobo (1986, p. 109), Nikolaev (1987, pp. 101, 111), M. Dellacasa (1988, p. 366), Angelini (1991, p. 223), Gangloff (1991, p. 41), Lobo (1992, p. 19) and Baraud (1992, p. 134) adopted the name *A. scybalarius* for this taxon although, in addition to Landin (1956, 1957a), Lumaret (1990, p. 262), Krell (1992, p. 282; 1993, p. 124) and Krell & Fery (1992, p. 232) explicity opposed its use. The name *scybalarius* has thus been used in two different senses in recent years (see also para. 6).

5. Fabricius (1801, p. 74) introduced the name *Aphodius rufescens* in place of *A. rufus* Moll, 1782; *rufescens* was adopted by Kloet & Hincks (1945, p. 199) but has not been further used. M. Dellacasa (1988, p. 366) recorded nearly 20 further junior synonyms of *rufus* Moll but none has been adopted as valid.

6. *Scarabaeus foetidus* Herbst, 1783 has, since Sturm (1800, p. 30), also been included in *Aphodius*. M. Dellacasa (1988, p. 130) recorded that no type is known. As noted in paras. 2 and 3 above, the taxon was misidentified as *A. scybalarius* Fabricius, 1781 and in the early literature referred to under this name. A few authors (Endrődi, 1956, p. 43; Panin, 1957, p. 175; Janssens, 1960, p. 184; Balthasar, 1964, p. 366; Baguena Corella, 1967, p. 129; Baraud, 1985, p. 183; Lumaret, 1990, p. 238; Tauzin, 1990, p. 163 and Rabil, 1992, p. 81) have continued to use *scybalarius* as the name for the taxon. The majority of recent authors, however, have correctly accepted *foetidus* as the valid name, following Landin (1956, 1957a). These authors include Klefbeck & Sjöberg (1960, p. 174), Machatschke (1969, p. 320), Stebnicka (1976, pp. 111–112, figs. 416, 417), Pope (1977, p. 44), Silfverberg (1979, p. 32; 1992, p. 37), G. Dellacasa (1983, p. 186), Jessop (1986, p. 22), Lundberg & Gustafsson (1986), M. Dellacasa (1988, p. 370) and Krell & Fery (1992, pp. 219, 232).

7. Fabricius (1792, p. 39) described a new taxon under the name *Scarabaeus rufus*. Later he (Fabricius, 1801, p. 82) transferred this to *Aphodius* Illiger. Erichson (1848, p. 918) placed the species under *Aegialia* Latreille, 1807 (p. 96) (SCARABAEIDAE, AEGIALIINAE or APHODIINAE, AEGIALIINI), where it has since remained. The lectotype, designated by Landin (1956, p. 223), is deposited in the Zoological Museum, University of Copenhagen. *S. rufus* Fabricius, 1792 is the type species of the subgenus *Rhysothorax* Bedel, 1911 (p. 44) by original designation. The name *Aegialia* (*Rhysothorax*) *rufa* (Fabricius) is in current use (see, for example, the recent works of Stebnicka, 1977, pp. 418–420, who cited usage references up to 1976, a small fraction of all citations; Baraud, 1992, p. 106; Krell & Fery, 1992, p. 210). Stebnicka (1977, p. 419) recorded *Aegialia spissipes* LeConte, 1878 (p. 611), based on a specimen from America, where the species had been introduced, as a synonym and noted two

citations of this name (in 1887 and 1931). Silfverberg (1977, p. 91) noted the homonymy between the names *Scarabaeus rufus* De Geer, 1778 and *S. rufus* Fabricius, 1792 and introduced *Aegialia rufina* as a replacement for Fabricius's name. Silfverberg (1979, p. 31; 1992, p. 37) treated his name *rufina* as a junior synonym of *A. spissipes* and adopted the latter name as valid, as did Lundberg & Gustafsson (1986). M. Dellacasa (1988, p. 360) and Gordon (1990, p. 273) used *rufina*. With these few exceptions *Aegialia rufus* (Fabricius, 1792) is in common usage.

8. The names *Dischista rufa* (De Geer, 1778), *Aphodius* (*Agrilinus*) *rufus* (Moll, 1782) and *Aegialia* (*Rhysothorax*) *rufa* (Fabricius, 1792) are currently in use for well-known and widespread taxa. None of the species has been included in the original genus *Scarabaeus* since 1817, and *rufus* Moll and *rufa* Fabricius have not been considered congeneric since 1848, when Fabricius's species was transferred from *Aphodius* to *Aegialia* (para. 7 above). The three species are placed in different tribes; *D. rufa* is placed in at least a different sub-family and possibly family. To avoid the confusion which would result from upsetting the long-established usage of the names, and in the interest of stability of nomenclature, we propose that the names be conserved. The specific name of *rufa* De Geer has been used unchallenged since 1883. The name *rufus* Moll is a junior primary homonym of De Geer's name but it has had, with few exceptions (see paras. 4 and 5 above), continuous usage since its publication in 1782. The senior subjective synonym *Aphodius scybalarius* (Fabricius, 1781) has been misused for *Aphodius* (*Aphodius*) *foetidus* (Herbst, 1783) (see para. 6 above) and its status is therefore ambiguous; to adopt *scybalarius* now for the species commonly called *rufus* Moll would cause considerable and unnecessary confusion. Not all workers would accept the change and, as a result, not only would the name *scybalarius* be used for two distinct taxa but there would be two names simultaneously in use for the taxon commonly called *rufus* Moll. We therefore propose that the name *scybalarius* be suppressed and that *rufus* Moll and *foetidus* Herbst be accepted as valid. The specific name of *rufus* Fabricius, 1792 is a junior primary homonym of *rufus* De Geer and a junior primary (and between 1801 and 1848 a junior secondary) homonym of *rufus* Moll; nevertheless it has had almost unbroken use in Europe. Adoption of *Aegialia spissipes* LeConte, 1878 (based on American material; see para. 7 above) instead of (or, more probably, as well as) the accepted name would cause undue confusion.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers:

(a) to suppress the specific name *scybalarius* Fabricius, 1781, as published in the binomen *Scarabaeus scybalarius*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(b) to rule that the following specific names are not invalid:

(i) *rufus* Moll, 1782, as published in the binomen *Scarabaeus rufus*, by reason of being a junior primary homonym of *Scarabaeus rufus* De Geer, 1778;

(ii) *rufus* Fabricius, 1792, as published in the binomen *Scarabaeus rufus*, by reason of being a junior primary homonym of *Scarabaeus rufus* De Geer, 1778 and of *S. rufus* Moll, 1782;

(2) to place on the Official List of Specific Names in Zoology the following names:
   (a) *rufus* De Geer, 1778, as published in the binomen *Scarabaeus rufus* and as defined by the lectotype designated in para. 1 above;
   (b) *rufus* Moll, 1782, as published in the binomen *Scarabaeus rufus* (not invalid by reason of being a junior primary homonym of *Scarabaeus rufus* De Geer, 1778);
   (c) *rufus* Fabricius, 1792, as published in the binomen *Scarabaeus rufus* and as defined by the lectotype designated by Landin (1956) (not invalid by reason of being a junior primary homonym of *Scarabaeus rufus* De Geer, 1778 and of *S. rufus* Moll, 1782);
   (d) *foetidus* Herbst, 1783, as published in the binomen *Scarabaeus foetidus*;
(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *scybalarius* Fabricius, 1781, as published in the binomen *Scarabaeus scybalarius* and as suppressed in (1)(a) above.

References

Angelini, F. 1991. Coleotterofauna dell'Altipiano della Sila (Calabria, Italia). *Memorie della Società Entomologica Italiana*, **70**: 171–254.

Baguena Corella, L. 1967. *Scarabaeoidea de la fauna Ibero-Balear y Pirenaica*. 576 pp. Consejo Superior de Investigaciones Cientificas, Instituto Español de Entomologia, Madrid.

Balthasar, V. 1964. *Monographie der Scarabaeidae und Aphodiidae der Palearktischen und Orientalischen Region. Coleoptera: Lamellicornia*, vol. 3 (Aphodiidae). 652 pp. Tschechoslowakische Akademie der Wissenschaften, Prague.

Baraud, J. 1985. Coléoptères Scarabaeoidea. Faune du Nord de l'Afrique du Maroc au Sinaï. *Encyclopédie Entomologique*, **46**: 1–652.

Baraud, J. 1992. Coléoptères Scarabaeoidea d'Europe. *Faune de France et Regions Limitrophes*, **78**: 1–856.

Bedel, L. 1911. *Faune des coléoptères du Bassin de la Seine*, vol. 4, part 1 (Scarabaeidae). 164 pp. Société Entomologique de France, Paris.

Creutzer, C. 1799. *Entomologische Versuche*. 142, 8 pp., 3 pls. Schaumburg, Vienna.

De Geer, C. 1778. *Mémoires pour servir à l'histoire des insectes*, vol. 7. xii, 950 pp., 49 pls. Hosselberg, Stockholm.

Dellacasa, G. 1983. Sistematica e nomenclatura degli Aphodiini italiani (Coleoptera Scarabaeidae: Aphodiinae). *Museo Regionale di Scienze Naturali, Torino, Monografie*, **1**: 1 467.

Dellacasa, M. 1988. Contribution to a world-wide catalogue of Aegialiidae, Aphodiidae, Aulonocnemidae, Termitotrogidae (Coleoptera, Scarabaeoidea). *Memorie della Società Entomologica Italiana*, **66**: 1–455.

Endrődi, C. 1956. Lemezescsápú Bogarak Lamellicornia. *Fauna Hungariae*, **9**(4): 1 188.

Erichson, W.F. 1848. *Naturgeschichte der Insecten Deutschlands*, Abt. 1 (Coleoptera), Band 3, Lieferung 6. Pp. vii, 800–968. Nicolai, Berlin.

Fabricius, J.C. 1781. *Species insectorum*, vol. 1. viii, 552 pp. Bohn, Hamburg & Kilonii.

Fabricius, J.C. 1792. *Entomologia systematica* ..., vol. 1, part 2. 538 pp. Proft, Hafniae.

Fabricius, J.C. 1801. *Systema Eleutheratorum. Secundum ordines, genera, species* ..., vol. 1. xxiv, 506 pp. Kiliae.

Gangloff, L. 1991. Lamellicornia. Scarabaeidae. Lucanidae. *Catalogue et Atlas des Coléoptères d'Alsace*, **4**: 1–107.

Gordon, R.D. 1990. A new species of *Aegialia* (*Aegialia*) (Coleoptera: Scarabaeidae: Aphodiinae) from southern Arizona and new data on north American *Aegialia*. *Coleopterists' Bulletin*, **44**: 271–273.

Herbst, J.F.W. 1783. Kritisches Verzeichniss meiner Insektensammlung. *Archiv der Insectengeschichte*, **4**: 1–72.

Holm, E. & Marais, E. 1992. Fruit chafers of southern Africa (Scarabaeidae: Cetoniini). 326 pp., 32 pls. Ecogilde, Hartebeespoort.

Illiger, J.K.W. 1798. *Verzeichniss der Käfer Preussens* ... xli, 510 pp. Gebauer, Halle.

Janssens, A. 1960. *Faune de Belgique, Insectes Coléoptères Lamellicornes*. 411 pp. Institut Royal des Sciences naturelles de Belgique, Bruxelles.

Jessop, L. 1986. Dung beetles and chafers, Coleoptera: Scarabaeoidea. New Edition. *Handbook for the Identification of British Insects*, **5**(11): 1–53.

Klefbeck, E. & Sjöberg, O. 1960. Catalogus insectorum Sueciae. XVI Coleoptera. *Opuscula Entomologica*, **18**(Supplement): 1–263.

Kloet, G.S. & Hincks, W.D. 1945. *A checklist of British insects*. lix, 477 pp. Authors, Stockport.

Kraatz, G. 1883. Ueber das männliche Begattungsglied der sogenannten Goliathiden und der Gattung *Pachnoda* und seine Verwendbarkeit für deren scharfe specifische Unterscheidung. *Verhandlungen des Naturforschenden Vereines in Brünn*, **21**: 21–30.

Krell, F.-T. 1992. Lamellicornia-Faunistik in Frankreich. *Entomologische Nachrichten und Berichte*, **36**(4): 280–282.

Krell, F.-T. 1993. Bermerkungen zu Barauds Bestimmungsbuch der Scarabaeoidea Europas. *Entomologische Nachrichten und Berichte*, **37**(2): 123–125.

Krell, F.-T. & Fery, H. 1992. Familienreihe Lamellicornia. Pp. 200–252 *in* Lohse, G.A. & Lucht, W., *Die Käfer Mitteleuropas*, vol. 13. Goecke & Evers, Krefeld.

Landin, B.O. 1956. The Fabrician species of Aphodiini and Aegialiini (Col. Lamellicornia). *Opuscula Entomologica*, **21**: 203–228.

Landin, B.O. 1957a. Critical comments upon some nomenclatorial and synonymical questions. With a practical application to some Coleoptera Lamellicornia. *Entomologisk Tidskrift*, **78**: 101–114.

Landin, B.O. 1957b. Skalbaggar — Coleoptera, Bladhorningar – Lamellicornia. Fam. Scarabaeidae. *Svensk Insektfauna*, **9**: 1–155.

Latreille, P.A. 1807. *Genera Crustaceorum et Insectorum* ..., vol. 2. Parisiis.

LeConte, J.L. 1878. The Coleoptera of Michigan. Descriptions of new species. *Proceedings of the American Philosophical Society*, **17**: 593–626.

Lobo, J.M. 1992. Modificación de las comunidades de Scarabaeoidea coprófagos (Coleoptera) en pastizales de altura del Sistema Central Ibérico (España) a lo largo de un gradiente altitudinal. *Acta Zoologica Mexicana*, (n.s.)**53**: 15–31.

Lumaret, J.P. 1990. Atlas des Coléoptères Scarabéides laparosticti de France. *Inventaires de Faune et de Flore*, **1**: 1–420.

Lundberg, S. & Gustafsson, B. 1986. *Catalogus Coleopterorum Sueciae*. Entomologiska Föreningen i Stockholm & Naturhistoriska Riksmuseet, Stockholm.

Machatschke, J.W. 1969. Familienreihe Lamellicornia. Pp. 265–371 *in* Freude, H., Harde, K.W. & Lohse, G.A., *Die Käfer Mitteleuropas*, vol. 8. Goecke & Evers, Krefeld.

Martin Piera, F., Veiga, C.M. & Lobo, J.M. 1986. Contribución al conocimiento de los Scarabaeoidea (Col.) coprófagos del macizo central de Guadarrama. *Eos*, **62**: 103–123.

Moll, C.E. von. 1782. Verzeichniss der Salzburgischen Insecten. *Neues Magazin für die Liebhaber der Entomologie*, **1**(4): 370–389.

Nikolaev, G.V. 1987. *Plastinchatousye Zhuki (Coleoptera, Scarabaeoidea) Kasachstana i Srednej Asii*. 232 pp. Nauka, Alma-Ata.

Panin, S. 1957. Coleoptera Familia Scarabaeidae (Subfamiliile: I Coprinae ... XVI Cetoniinae). *Fauna Republicii Populare Romîne*, **10**(4): 1–315.

Pope, R.D. 1977. Kloet and Hincks, a checklist of British insects, Ed. 2, part 3 (Coleoptera and Strepsiptera). *Handbook for the Identification of British Insects*, **11**(3): 1–105.

Rabil, J. 1992. Ah, cette Grésigne! Catalogue des coléoptères de la forêt de la Grésigne (Tarn). *Nouvelles Archives du Muséum d'Histoire Naturelle de Lyon*, **29–30**: 1–167.

Schönherr, C.J. 1817. *Synonymia insectorum, oder Versuch einer Synonymie aller bisher bekannten Insecten* ..., vol. 1 (Eleutherata oder Käfer), Theil 3 (*Hispa* ... *Molorchus*). xi, 506 pp., pls. 5, 6. Bruzelius, Upsala.

Silfverberg, H. 1977. Nomenclatoric notes on Coleoptera Polyphaga. *Notulae Entomologicae*, **57**: 91–94.

Silfverberg, H. (Ed.). 1979. *Enumeratio Coleopterorum Fennoscandiae et Daniae*. vi, 79 pp. Helsingin Hyönteisvaihtoyhdistys, Helsinki.

Silfverberg, H. 1992. *Enumeratio coleopterorum Fennoscandiae, Daniae et Baltiae*. v, 94 pp. Helsingin Hyönteisvaihtoyhdistys, Helsinki.

Stebnicka, Z. 1976. Żukowate — Scarabaeidae, Grupa podrodzin: Scarabaeidae laparosticti. *Klucze do Oznaczania Owadów Polski*, **19**(28a): 1–139.

Stebnicka, Z. 1977. A revision of the world species of the tribe Aegialiini (Coleoptera, Scarabaeidae, Aphodiinae). *Acta Zoologica Cracoviensia*, **22**(11): 397–506.

Sturm, J. 1800. *Verzeichnis meiner Insecten-Sammlung oder Entomologisches Handbuch für Liebhaber und Sammler*, part 1. xvi, 116 pp., 4 pls. Author, Nürnberg.

Tauzin, P. 1990. Coléoptères Scarabaeoidea Coprophages du Maroc. *Entomologiste*, **46**(4): 159–165.

Case 2885

Ischyrus Lacordaire, 1842, *Lybas* Lacordaire, 1842, *Mycotretus* Lacordaire, 1842 and *Megischyrus* Crotch, 1873 (Insecta, Coleoptera): proposed conservation

Paul E. Skelley

Department of Entomology & Nematology, Building 970, Hull Road, University of Florida, Gainesville, Florida 32611–0620, U.S.A.

Michael A. Goodrich

Department of Zoology, Eastern Illinois University, Charleston, Illinois 61920, U.S.A.

Abstract. The purpose of this application is to conserve the names of the American beetle genera *Ischyrus* Lacordaire, 1842, *Lybas* Lacordaire, 1842, *Mycotretus* Lacordaire, 1842 and *Megischyrus* Crotch, 1873 in their current usage. *Ischyrus*, *Lybas* and *Mycotretus* were first used as available names by Dejean (1836), but they have long been used in the sense of Lacordaire (1842) and attributed to that authorship. Crotch (1873, 1876) designated *Erotylus undatus* Olivier, 1792 as type species of his new nominal genus *Megischyrus*; *Erotylus quadripunctatus* Olivier, 1792 as type species of *Ischyrus* (sensu Lacordaire); and *Lybas normalis* Lacordaire, 1842 as type species of *Lybas* (sensu Lacordaire). Boyle (1956) designated *Erotylus lesueuri* Chevrolat, 1835 as type species of *Mycotretus* (sensu Lacordaire). Crotch's (1873) nomenclature for *Ischyrus* and *Megischyrus*, and Lacordaire's (1842) nomenclature for *Mycotretus* and *Lybas*, are those currently used and it is proposed that they be adopted.

---

1. The generic names *Ischyrus* (p. 428), *Lybas* (p. 429) and *Mycotretus* (p. 428) were first used by Dejean (1836) in fascicle 5 of the second edition of his catalog. He also used the names in the third edition (1837, pp. 452–453) (see Madge, 1988, for dates of publcation). In both instances he attributed authorship of the name *Ischyrus* to Chevrolat, listing *Erotylus undatus* Olivier, 1792 (p. 434) as the first of 17 included species. Dejean (1836) listed a number of species, including *Erotylus quadripunctatus* Olivier, 1792 (p. 437), under the new genus *Mycotretus* (p. 428), which he also attributed to Chevrolat. He listed *Erotylus lesueuri* Chevrolat, 1835 (no. 175) and '*Lybas normalis* Lacordaire' (at that time a nomen nudum) under the new genus *Lybas*, which he attributed to Chevrolat. Dejean's catalogs did not include any description or diagnosis for the genera or species; nevertheless, the names *Ischyrus*, *Lybas* and *Mycotretus* were made available under Article 12b(5) of the Code by inclusion of previously published nominal species in these genera.

2. In his monograph of the EROTYLIDAE, Lacordaire (1842) described *Ischyrus* (p. 89), *Lybas* (p. 228) and *Mycotretus* (p. 132); like Dejean, he attributed their authorship to Chevrolat. Lacordaire included in *Ischyrus* many of the species which Dejean had listed under *Mycotretus* and included in *Mycotretus* all the species with available names which Dejean had listed under *Lybas*, explaining that they should be

placed in these genera on account of their morphology. Lacordaire did not designate type species for these genera. He (1842, p. 235) described *Lybas normalis*, which had been previously attributed to him in the Dejean catalogs, and included other species in *Lybas*. Lacordaire also proposed two divisions of *Ischyrus*; the first division contained the species listed in the Dejean catalogs as *Ischyrus*, while the second division contained many species which Dejean had listed under *Mycotretus*, including *Erotylus quadripunctatus* Olivier, 1792 (p. 437).

3. Crotch (1873, pp. 143–144) raised Lacordaire's divisions of *Ischyrus* to generic rank. He named the first division *Megischyrus* (p. 143) and designated *Erotylus undatus* Olivier, 1792 (p. 434) as the type species. The second division he maintained as *Ischyrus* and (p. 144) designated *Erotylus quadripunctatus* as the type species. This designation for *Ischyrus* is invalid under the Code since *E. quadripunctatus* was not included in the genus by Dejean (see para. 1 above). However, Crotch gave Lacordaire (1842) as the describer of *Ischyrus*, although he remarked that the name was 'first indicated by Chevrolat in 1836', referring to the Dejean Catalog. Three years later, Crotch (1876, pp. 422–433) revised these genera, moving into other genera some of the species that he had in 1873 included in *Ischyrus* (sensu Lacordaire's second 'division'); he restated his type designations for *Megischyrus* and *Ischyrus*. Crotch (p. 471) designated *Lybas normalis*, originally listed under *Lybas* and since 1842 an available name (see paras. 1 and 2 above), as the type species of *Lybas* Dejean, 1836. This designation is invalid because *L. normalis* was not available at the first usage of the name *Lybas* (see para. 1 above).

4. Crotch's classification for *Ischyrus* and *Megischyrus* and Lacordaire's classification for *Mycotretus* and *Lybas* have been used in all subsequent taxonomic papers and catalogs (for example, Gemminger & Harold, 1876; Gorham, 1883; Kuhnt, 1911; Bruch, 1914; Blatchley, 1917; Schenkling, 1919; Leng, 1920; Schaeffer, 1931; Mader, 1938; Blackwelder, 1945; Guérin, 1949; Boyle, 1954; Delkeskamp, 1957; Dillon & Dillon, 1961; Arnett, 1963).

5. Boyle (1956, p. 137), realizing that no type had been designated, selected *Erotylus lesueuri* Chevrolat, 1835 as the type species of *Mycotretus*, attributing the genus to Lacordaire (1842). He noted that the type species was figured in color by Gorham (1887–1899). Under the Code, this designation is invalid for *Mycotretus* Dejean, 1836 since *E. lesueuri* was not included in the original use (see para. 1 above); however, it would be valid for *Mycotretus* if authorship of that name were attributed to Lacordaire (1842).

6. Alvarenga (1965, pp. 79, 85–86) recognized that Crotch had overlooked or ignored the Dejean catalog in establishing the name *Megischyrus* and in designation of the type species of *Ischyrus*. Alvarenga noted that *Megischyrus* Crotch, 1873 (type species *Erotylus undatus*) had the same included species as, and therefore was a junior subjective synonym of, *Ischyrus* Dejean, 1836, which was made available by inclusion of these species; he gave *Erotylus undatus* as the type species of *Ischyrus* 'Chevrolat' (recte Dejean), and this valid type designation makes *Megischyrus* a junior objective synonym of *Ischyrus*. Alvarenga (p. 86) proposed the name *Micrischyrus* as a replacement for *Ischyrus* (sensu Crotch) and designated *Erotylus quadripunctatus* as its type species. The name *Micrischyrus* has never been used other than by its author (Alvarenga, 1977, p. 105) in renaming a homonym within *Ischyrus* (sensu Crotch), nor has Alvarenga's formally correct treatment of the name *Ischyrus* been followed.

In contrast, *Ischyrus* is still used extensively in Crotch's sense (see para. 3 above), as typified by *Erotylus quadripunctatus*, and it is usually attributed to Lacordaire (1842) (for example, Kirk, 1969; Kirk & Balsbaugh, 1975; White, 1983; Arnett, 1985; Skelley, Goodrich & Leschen, 1991; Lawrence, 1991).

7. Alvarenga (1965, pp. 80 81, 85, 87) also realized that Dejean's catalogs had been overlooked or ignored in the designation of the type species of *Lybas* by Crotch (1876) and of *Mycotretus* by Boyle (1956). Alvarenga (p. 85) selected *Erotylus lesueuri* as the type species of *Lybas* Dejean, a species included in that genus in 1836. Alvarenga (p. 81) proposed the name *Apolybas* as a replacement for *Lybas* (sensu Lacordaire, 1842) and designated *Lybas normalis* as its type species. Alvarenga (p. 87) gave *Erotylus ornatus* Duponchel, 1824 (p. 49) as the type species of *Mycotretus* 'Chevrolat' (recte Dejean), citing a non-existing designation by Gorham (1888, p. 47); following Gemminger & Harold (1876), Gorham (1888) had attributed *Mycotretus* to Lacordaire but did not designate or indicate *E. ornatus* as the type species as Alvarenga stated. Despite the erroneous citation Alvarenga's designation of *E. ornatus* as the type species of *Mycotretus* Dejean is valid, under Article 69a(iv) of the Code. Alvarenga's replacement of *Lybas* (sensu Lacordaire) by *Apolybas* has never been followed, and his typification of *Mycotretus* has been used only twice since 1965 in the descriptions of new species by himself (Alvarenga, 1983, 1989).

8. To avoid confusion it is important to maintain in their current usage (see para. 4 above) the names *Ischyrus*, *Lybas*, *Megischyrus* and *Mycotretus* as defined by Lacordaire (1842) and Crotch (1873), with the attributions of authorship as indicated by Gemminger & Harold (1876). Crotch's acceptance of Lacordaire as the author of *Ischyrus* and Gemminger & Harold's acceptance of Lacordaire as the author of *Lybas* and *Mycotretus* were not invalid at that time, and it would be in the interest of stability to maintain these attributions. We therefore propose that *Ischyrus*, *Lybas* and *Mycotretus* be attributed to Lacordaire (1842) by suppressing previous uses of these names, and that the type species designations for these genera by Crotch (1873, 1876) and Boyle (1956) be accepted.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the following generic names for the purposes of both the Principle of Priority and the Principle of Homonymy:
   (a) *Ischyrus* Dejean, 1836, and all uses of the name *Ischyrus* prior to the publication of *Ischyrus* Lacordaire, 1842;
   (b) *Lybas* Dejean, 1836, and all uses of the name *Lybas* prior to the publication of *Lybas* Lacordaire, 1842;
   (c) *Mycotretus* Dejean, 1836, and all uses of the name *Mycotretus* prior to the publication of *Mycotretus* Lacordaire, 1842;

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Ischyrus* Lacordaire, 1842 (gender: masculine), type species by subsequent designation by Crotch (1873) *Erotylus quadripunctatus* Olivier, 1792;
   (b) *Lybas* Lacordaire, 1842 (gender: masculine), type species by subsequent designation by Crotch (1876) *Lybas normalis* Lacordaire, 1842;
   (c) *Megischyrus* Crotch, 1873 (gender: masculine), type species by original designation *Erotylus undatus* Olivier, 1792;

(d) *Mycotretus* Lacordaire, 1842 (gender: masculine), type species by subsequent designation by Boyle (1956) *Erotylus lesueuri* Chevrolat, 1835;

(3) to place on the Official List of Specific Names in Zoology the following names:
(a) *quadripunctatus* Olivier, 1792, as published in the binomen *Erotylus quadripunctatus* (specific name of the type species of *Ischyrus* Lacordaire, 1842);
(b) *normalis* Lacordaire, 1842, as published in the binomen *Lybas normalis* (specific name of the type species of *Lybas* Lacordaire, 1842);
(c) *undatus* Olivier, 1792, as published in the binomen *Erotylus undatus* (specific name of the type species of *Megischyrus* Crotch, 1873);
(d) *lesueuri* Chevrolat, 1835, as published in the binomen *Erotylus lesueuri* (specific name of the type species of *Mycotretus* Lacordaire, 1842);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
(a) *Apolybas* Alvarenga, 1965 (a junior objective synonym of *Lybas* Lacordaire, 1842);
(b) *Ischyrus* Dejean, 1836, as suppressed in (1)(a) above;
(c) *Lybas* Dejean, 1836, as suppressed in (1)(b) above;
(d) *Micrischyrus* Alvarenga, 1965 (a junior objective synonym of *Ischyrus* Lacordaire, 1842);
(e) *Mycotretus* Dejean, 1836, as suppressed in (1)(c) above.

Acknowledgement

For publication support we thank the Florida Agriculture Experiment Station, Journal Series No. R-03114.

References

Alvarenga, M. 1965. Espécies tipos dos gêneros e subgêneros neotropicais da família Erotylidae (Coleoptera). *Boletim da Universidade Federal do Paraná*, Zoologia, **2**(6): 75–92.

Alvarenga, M. 1977. Notas taxonômicas sobre a família Erotylidae (Coleoptera). *Dusenia*, **10**(2): 103–107.

Alvarenga, M. 1983. Seis espécies nova do genero *Mycotretus* Chevrolat, 1837, da região Amazonica. (Coleoptera, Erotylidae). *Acta Amazonica*, **13**: 583–589.

Alvarenga, M. 1989. Uma espécies nova de genero *Mycotretus* Chevrolat, 1837, da região Amazonica (Coleoptera, Erotylidae). *Memórias do Instituto Oswaldo Cruz*, **84**(supplement 4): 35–36.

Arnett, R.H., Jr. 1963. *The beetles of the United States*. 1112 pp. The Catholic University of America Press, Washington, D.C.

Arnett, R.H., Jr. 1985. *American Insects, a handbook of the insects of America North of Mexico*. 850 pp. Van Nostrand Reinhold, New York.

Blackwelder, R.E. 1945. Checklist of the coleopterous insects of Mexico, Central America, the West Indies, and South America. Part 3. Erotylidae. *Bulletin of the United States National Museum*, **185**: 456–469.

Blatchley, W.S. 1917. On some new or noteworthy Coleoptera from the west coast of Florida. *The Canadian Entomologist*, **49**: 137–143, 236–240, 272–279.

Boyle, W.W. 1954. Concerning the status of *Ischyrus graphicus* Lacordaire, with descriptions of four new erotylid species from western North America (Coleoptera: Erotylidae). *Journal of the New York Entomological Society*, **62**: 39–53.

Boyle, W.W. 1956. A revision of the Erotylidae of America north of Mexico (Coleoptera). *Bulletin of the American Museum of Natural History*, **110**(2): 61–172.

Bruch, C. 1914. Catálogo sistemático de los Coleópteros de la República Argentina. Pars IX. Familias: Chrysomelidae, Cassidae, Hispidae, Languridae, Erotylidae, Coccinellidae, y Endomychidae. *Revista Museo de La Plata*, **19**(2) (2nd ser., vol 6): 346–400.

Chevrolat, L.A.A. 1835. *Coléoptera du Mexique*. Cent. 2, fasc. 8. Strasbourg.

Crotch, G.R. 1873. A list of Erotylidae collected by Edward M. Janson, in the vicinity of Santo Domingo, Chontales, Nicaragua, with descriptions of new genera and species. *Cistula Entomologica*, **1**: 141–150.

Crotch, G.R. 1876. A revision of the coleopterous family Erotylidae. *Cistula Entomologica*, **1**: 377–572.

Dejean, P.F.M.A. 1836. *Catalogue des Coléoptères de la collection de M. le Comte Dejean*, Ed. 2. Livr. 5. Pp. 361–443. Méquignon-Marvis, Paris.

Dejean, P.F.M.A. 1837. *Catalogue des Coléoptères de la collection de M. le Comte Dejean*, Ed. 3. Revue, corrigée et augmentée. Livr. 5. Pp. 385–503. Méquignon-Marvis, Paris.

Delkeskamp, K. 1957. Beiträge zur Kenntnis der Insektenfauna Boliviens. 3. Coleoptera II, Erotylidae. (22. Beitrag zur Kenntnis der Erotylidae (Col.)). *Veröffentlichungen der Zoologischen Staatssammlung München*, **5**: 93–116.

Dillon, E.S. & Dillon, L.S. 1961. *A manual of common beetles of Eastern North America*. 884 pp. Row, Peterson and co., Evanston, Illinois.

Duponchel, P.A.J. 1824. Monographie du genre Erotyle. *Mémoires du Muséum d'Histoire Naturelle*, Paris, **12**: 30–61, 156–176.

Gemminger, M. & Harold, B. von. 1876. *Catalogus Coleopterorum, hucusque descriptorum, synonymicus et systematicus*, vol. 12. Chrysomelidae (Part 2), Languridae, Erotylidae, Endomychidae, Coccinellidae, Corylophidae, Platypsyllidae. Pp. 3479 3822, i–lxxiii. Ackermann, Monachii.

Gorham, H.S. 1883. Descriptions of new species of beetles belonging to the family Erotylidae. *Proceedings of the Zoological Society of London*, **1883**: 75–87.

Gorham, H.S. 1887–1899. Insecta. Coleoptera, vol. 7 (Erotylidae, Endomychidae, and Coccinellidae). *In* Godman, F.D. & Salvin, O. (Eds.), *Biologia Centrali-Americana*. 276 pp., 13 pls. Porter, London.

Guérin, J. 1949. Descrição de novas espécies Neotropicais das familias Clytridae, Megalopodidae e Erotylidae (Col.). *Revista de Entomologia*, **20**: 229–236.

Kirk, V.M. 1969. A list of beetles of South Carolina, Part I — northern coastal plain. *South Carolina Agricultural Experiment Station Technical Bulletin*, **1033**: 1–124.

Kirk, V.M. & Balsbaugh, E.U. 1975. A list of the beetles of South Dakota. *South Dakota State University Agricultural Experiment Station Technical Bulletin*, **42**: 1–139.

Kuhnt, P. 1911. Family Erotylidae. *In* Junk, W. (Ed.). *Coleopterorum Catalogus*, part 34, **15**: 1–103.

Lacordaire, J.T. 1842. *Monographie des Erotyliens, famille de l'ordre des Coléoptères*. xiv, 543 pp. Roret, Paris.

Lawrence, J.F. 1991. *Erotylidae (Cucujoidea) (including Dacnidae)*. Pp. 473–475 *in* Stehr, F.W. (Ed.). *Immature Insects*, vol. 2. xvi, 975 pp. Kendall Hunt, Dubuque, Iowa.

Leng, C.W. 1920. *Catalogue of the Coleoptera of America north of Mexico*. 470 pp. Mt. Vernon, New York.

Mader, L. 1938. Über neue und bekannte Erotyliden. *Entomologische Blätter*, **34**(1): 14–19.

Madge, R.B. 1988. The publication dates of Dejean's catalogues. *Archives of Natural History*, **15**(3): 317–321.

Olivier, A.G. 1792. *Encyclopédie méthodique. Histoire naturelle des insectes*, vol. 6. Pp. 369–704. Paris.

Schaeffer, C. 1931. On a few new and known Coleoptera. *Bulletin of the Brooklyn Entomological Society*, **26**: 174–176.

Schenkling, S. 1919. Erotyliden-Studien. I. *Archiv für Naturgeschichte*, **83**A(11): 77 93.

Skelley, P.E., Goodrich, M.A. & Leschen, R.A.B. 1991. Fungal host records for the Erotylidae (Coleoptera: Cucujoidea) of America north of Mexico. *Entomological News*, 102(2): 57–72.

White, R.E. 1983. *A field guide to the beetles of North America*. 368 pp. Houghton Mifflin, Boston.

Case 2919

Lithobius piceus L. Koch, 1862 (Chilopoda): proposed conservation of the specific name

E.H. Eason

Bourton Far Hill, Moreton-in-Marsh, Gloucestershire GL56 9TN, U.K.

Abstract. The purpose of this application is to conserve the specific name of the centipede *Lithobius piceus* L. Koch, 1862, a widespread species in Europe. It is threatened by the unused senior subjective synonym *L. quadridentatus* Menge, 1851.

---

1. The name *Lithobius quadridentatus* was published by Menge (1851, p. 12) accompanied by a short description of a specimen from northern Poland. *Lithobius piceus* was published by L. Koch (1862, p. 49) accompanied by a fairly detailed description of a specimen from Bavaria.

2. Fanzago (1876, p. 77) identified a specimen from northern Italy as *L. quadridentatus*; in my opinion this was correct. However, Fedrizzi (1877, p. 215) questioned Fanzago's determination of this specimen and concluded that a new nominal species, *Lithobium violaceus*, should be based on it. The name *L. violaceus* has not been used since.

3. The name *L. quadridentatus* has not been used since 1876. Eason & Minelli (1976, p. 194) stated that *L. violaceus* was a junior subjective synonym of *L. piceus* L. Koch, 1862 and noted that *L. violaceus* was the same as *L. quadridentatus* sensu Fanzago (1876) 'nec Menge'. However, in this last statement Prof Minelli and I were simply following Fedrizzi (1877), and consideration of Menge's (1851) description of *L. quadridentatus* shows this name to be a senior subjective synonym of *L. piceus*.

4. The name *Lithobius piceus* L. Koch, 1862 has been used for a widespread European species in over one hundred papers. I give here ten examples (Latzel, 1880; Brolemann, 1930; Verhoeff, 1937; Loksa, 1955; Demange, 1958; Dobroruka, 1958; Matic, 1966; Jeekel, 1971; Eason, 1972; Serra, 1983), and others are given in their bibliographies. The subjective synonym *L. quadridentatus* Menge, 1851 has not been used as valid since Fanzago (1876; see para. 2 above) and to allow it to displace *L. piceus* would contravene the criteria mentioned in Article 79c of the Code.

5. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the specific name *quadridentatus* Menge, 1851, as published in the binomen *Lithobius quadridentatus*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Specific Names in Zoology the name *piceus* L. Koch, 1862, as published in the binomen *Lithobius piceus*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *quadridentatus* Menge, 1851 as published in the binomen *Lithobius quadridentatus* and as suppressed in (1) above.

References

Brolemann, H.W. 1930. Éléments d'une faune des myriapodes de France. Chilopodes. *Faune de France*, **25**: 1–405.

Demange, J.M. 1958. Sur quelques myriapodes cavernicoles de France et de Suisse. *Revue Suisse de Zoologie*, **65**: 843–855.

Dobroruka, L.J. 1958. Příspěvek k poznání stonožek z Tater (Chilopoda). *Věstník Československé Zoologické Společnosti v Praze*, **22**: 113–120.

Eason, E.H. 1972. The type specimens and identity of the species described in the genus *Lithobius* by C.L. Koch and L. Koch from 1841 to 1878 (Chilopoda: Lithobiomorpha). *Bulletin of the British Museum (Natural History), Zoology*, **22**: 103–150.

Eason, E.H. & Minelli, A. 1976. The identity of the species of Lithobiidae described by F. Fanzago and G. Fedrizzi from 1874 to 1881 (Chilopoda, Lithobiomorpha). *Fragmenta Entomologica*, **12**: 183–205.

Fanzago, F. 1876. Nuove contribuzioni alla fauna miriapodologica italiana. *Annuario della Società dei Naturalisti e Matematici. Modena*, **10**: 60–80.

Fedrizzi, G. 1877. I litobi italiani. Monografia. *Atti della Società Veneto-Trentina di Scienze Naturali in Padova*, **5**: 184–233.

Jeekel, C.A.W. 1971. Duizend- en miljoenpoten (Chilopoda en Diplopoda) uit Noord-Brabant en de noordelijke helft van Limberg. *Entomologische Berichten*, **31**: 191–202.

Koch, L. 1862. *Die Myriapodengattung* Lithobius *darestellt*. 92 pp., 2 pls. Lotzbeck, Nürnberg.

Latzel, R. 1880. *Die Myriopoden der Österreichisch-Ungarischen Monarchie. 1. Die Chilopoden.* 228 pp., 10 pls. Holder, Vienna.

Loksa, I. 1955. Über die Lithobiiden des Faunagebiets des Karpatenbeckens. *Acta Zoologica Academiae Scientiarum Hungaricae*, **1**: 331–349.

Matic, Z. 1966. Chilopoda: Anamorpha. *Fauna Republicii Socialiste Romania*, **6**: 1–267.

Menge, A. 1851. Myriapoden der Umgegend von Danzig. *Neueste Schriften der Naturforschenden Gesellschaft in Danzig*, **4**(2): 1–22.

Serra, A. 1983. Contribució al coneixement de la fauna cavernicola (Chilopoda, Lithobiomorpha) de les Balears. *Speleon*, **26**: 33–38.

Verhoeff, K.W. 1937. Chilopoden-Studien. Zur Kenntnis der Lithobiiden. *Archiv für Naturgeschichte*, **6**: 171–257.

Case 2928

Regnum Animale ..., Ed. 2 (M.J. Brisson, 1762): proposed rejection, with the conservation of the mammalian generic names *Philander* (Marsupialia), *Pteropus* (Chiroptera), *Glis*, *Cuniculus* and *Hydrochoerus* (Rodentia), *Meles*, *Lutra* and *Hyaena* (Carnivora), *Tapirus* (Perissodactyla), *Tragulus* and *Giraffa* (Artiodactyla)

Anthea Gentry

c/o The Secretariat, International Commission on Zoological Nomenclature, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.

Abstract. The purpose of this application is to conserve 11 mammal generic names which were first published in M.J. Brisson's *Regnum Animale* (1762). Brisson did not always use binominal names for species and the work is therefore not available; its rejection is proposed. However, a number of generic names included in it have had established usage for over 230 years. These are *Philander* (four-eyed opossum of South and Central America), *Pteropus* (fruit bat or flying 'fox' from the tropics of the Old World), *Glis* (European fat or edible dormouse), *Cuniculus* (South and Central American lowland paca), *Hydrochoerus* (South and Central American capybara), *Meles* (European and Asian badger), *Lutra* (river otter with world-wide distribution except Australasia), *Hyaena* (striped and brown hyaenas of Asia and Africa), *Tapirus* (tapir of Asia, Central and South America), *Tragulus* (Asian chevrotain or mouse-deer) and *Giraffa* (African giraffe). The genera include both Recent and fossil species.

---

1. In 1911 (Opinion 37) and 1955 (Direction 16) the Commission ruled that M.J. Brisson's (1760) work on birds entitled *Ornithologia sive Synopsis methodica sistens Avium* ..., although not consistently binominal, was nevertheless available for generic names and it was placed on the Official List. The ruling was later restricted (Direction 105, October 1963) to generic names listed in the 'Tabula synoptica Avium secundum Ordines, Sectiones & Genera' within the work. In 1938 Dr G.H.H. Tate enquired about the status of the mammal names published in Brisson's companion work, *Regnum Animale* (1762), and noted: 'The work on mammals is prepared in a manner essentially similar to that on birds. Consequently, by analogy the generic names of mammals therein proposed should be accepted'. Notes on the enquiry were published (BZN **1**: 112 (1945), **4**: 313–315 (1950) and **7**: 203–204 (1952)) and mammalogists were invited to comment. An investigation of Brisson's (1762) work was entrusted to the then Secretary of the Commission (Francis Hemming) by the International Congress of Zoology at Paris in 1948. However, the study was never completed. Ellerman & Morrison-Scott (1951, pp. 3–4, 350, 547) gave a summary of some of Brisson's (1762) mammal names currently in use, and they urged acceptance of Brisson as the author. In 1956 (Opinion 384) several carnivore generic names (of a number of authors) were placed on the Official List but three of Brisson's names (*Meles*, *Lutra* and *Hyaena*) were omitted pending a decision on their status. In 1957 (Opinion 467) the name *Odobenus* was conserved as the generic name for the walrus,

attributed to Brisson (1762) 'without prejudice to the general question of the availability of the work'. In 1988 M. van Dort submitted an application to the Commission to confirm Brisson (1762) as the author of *Tragulus*.

2. In Opinion 465 (May 1957) Morrison-Scott noted: 'Brisson used many polyverbal designations for species and certainly cannot be claimed to have applied the principles of binominal nomenclature'. Hemming also noted (Opinion 467): 'My view is that, in the absence of action by the International Commission, the *Regnum Animale* of 1762 is not an available work' and (Direction 79, October 1957) mentioned Brisson's work as being non-binominal and therefore unavailable for names. However, no formal decision has ever been published on this. Ellerman & Morrison-Scott (1951, p. 3) noted '... we have asked the Commission to validate [a number] of the generic names of Brisson ...'; they sent notes to Hemming on some of the names involved but an application to the Commission for their conservation has never been made.

3. The early part of Brisson's life was spent on natural history and his work *Regnum Animale* (1756) was intended to cover the whole of zoology in nine classes (set out in 1762, pp. 5–6) but only two 'classes' (the quadruped and cetacean mammals) were completed. Following the death in 1757 of R.A.F. Réaumur, whose assistant he was, Brisson abandoned natural history and was appointed professor of natural philosophy at Navarre and later at Paris. Brisson's *Regnum Animale* (1756) and *Ornithologia* (1760) were published in Paris in French and Latin. The bookseller Theodore Haak in Leiden was responsible for the republication in 1762 of a revised edition of the 1756 work, solely in Latin and including additional species names, denoted by square brackets. The introduction to the 1762 work provided (pp. 12 13) a morphological key (Tabula synoptica Quadrupedum ...) in which the generic names were given in the Latin nominative singular. They were also given in the singular in the Index Alphabeticus (pp. 251–283, 291–294), while in the text and the Index Quadrupedum (pp. 239–250) and Index Cetaceorum (pp. 289 290) the generic names were given in the plural. The names were cited in the singular in combination with names for species; for example, 'Genus Cuniculi' is followed by 'Cuniculus javensis'. The names for species are not consistently binominal. Hemming (in litt. to Tate, 1945) wrote: 'After a careful examination of both books [*Ornithologia* and *Regnum Animale*], my view is that neither of them uses a binominal system of nomenclature but that the system in the mammal book of 1762 is considerably better and closer to the Linnaean system than that in the book of 1760'. The majority of authors (see para. 7 below) have accepted Brisson (1762) as the author of a number of mammal names currently in use; others have adopted the names but referred to their uncertain availability (see, for example, Merriam, 1895; Ellerman & Morrison-Scott, 1951; Corbet, 1978). Some editors (for example, Anderson & Jones, 1984; Nowak, 1991) have accepted some names from Brisson (where there would otherwise be a change of name) but not others. Trouessart (1897–1899), Hopwood (1947, pp. 533–536) and, more recently, Honacki, Kinman & Koeppl (1982, and the 1993 second edition edited by Wilson & Reeder), noted that Brisson's 1762 work was not consistently binominal and considered it to be unavailable; some of Brisson's names were adopted from later authors whilst others were replaced by different names.

4. Brisson (1762) described and named 46 mammal genera. Twenty four of the names he used were repeated from Linnaeus and are present in the latter's 10th

edition (1758) of *Systema Naturae*; Brisson cited only the 6th edition (1748) of Linnaeus's work and the first edition (1746) of Linnaeus's *Fauna Suecica* in his synonymies and his bibliographies (pp. 284–288, 295–296). Brisson also introduced 22 new names for genera, based on descriptions and references to earlier authors; 10 of these names have been considered to be junior synonyms of names published by Linnaeus (1758) and have remained unused. Several of the taxonomic species in Brisson's work are found in Linnaeus (1758) but Brisson also introduced many new taxa; some of the new names for species were univerbal but only one survived into modern usage. Morrison-Scott commented (Opinion 465) that 'although a number of important generic names are currently accepted as from Brisson, none of his specific names are accepted as available'.

5. Among the new generic names proposed by Brisson (1762) were 12 which have been adopted by mammalogists and which are in current use. One of these (*Odobenus*) has already been conserved (para. 1 above). Merriam (1895) reviewed Brisson's genera and designated type species for the nominal genera which were in use. The types were all Linnaean (1758 and 1766) species. It is possible that there were earlier type fixations, either by intent or default but, with the exception of the designations for *Cuniculus* and *Tragulus* (see below), Merriam's designations reflected usage and the species designated have been accepted as the types by all subsequent authors (see, for example, G.M. Allen, 1939; Ellerman & Morrison-Scott, 1951; Corbet, 1978; Honacki, Kinman & Koeppl (Eds.), 1984; Wilson & Reeder (Eds.), 1993). Some of Brisson's generic names are available with the same meaning from subsequent authors. Brisson, however, has had long-established citation as the author (see para. 6 below). The situation is not so simple with other names and in each case rejection of usage dating from Brisson's work results in a change of generic and family-group name and unnecessary confusion. The names are dealt with below.

Philander (pp. 13, 207; four-eyed opossum).

The genus was described and nine taxonomic species were included, the first being 'philander' based on Linnaeus (1748) and other references.

The name *Philander* was included in Gronovius (1763) but this work has been placed on the Official Index as unavailable (Opinions 20, (July 1910), 89 (December 1925) and 261 (August 1954)).

Tate (1939, p. 161) demonstrated that Brisson's extensive description of 'philander', ending 'Caput pilis fuscis vestitur, & supra utrumque oculum macula inest flava', referred to the four-eyed opossum, called *Didelphis opossum* by Linnaeus (1758, p. 55), and not to the woolly opossum, *D. philander* Linnaeus, 1758 (p. 54). Since Brisson's names were under scrutiny following his (1938) enquiry, Tate adopted the names *Caluromys* J.A. Allen, 1900 (p. 189; type species by original designation *D. philander* Linnaeus) and *Metachirops* Matschie, 1916 (p. 268; *D. opossum* Linnaeus was an originally included species) (although he commented that *Philander* Brisson was the valid name for *Metachirops*), and this has been followed by some authors (see, for example, Pine, 1973; Husson, 1978; Hall, 1981). Other authors (among them Collins, 1973; Gardner, 1981; Nowak & Paradiso, 1983; Anderson & Jones, 1984; Nowak, 1991; and Wilson & Reeder, 1993) have used the name *Philander* Tiedemann (1808, p. 426) as valid for the four-eyed opossums. Tiedemann cited Brisson as the author of *Philander* and included three species. Hershkovitz

(1949, p. 12) designated the first of these, 'Das virginische opossum, *P. virginianus* (*Did. opossum* L.)', as the type species of the genus. In the interest of stability of nomenclature of the four-eyed opossum it is proposed that the usage of the name *Philander* be maintained, and that it be attributed to the earlier authorship of Brisson (1762) with *D. opossum* designated as the type species.

Pteropus (pp. 13, 153; fruit bat).

The genus was described and three taxonomic species were included, among them 'pteropus' based on 'Vespertilio cauda nulla' from Linnaeus (1748) and on other references. Merriam (1895, p. 376) designated this as the type species under the name *Vespertilio vampyrus* Linnaeus, 1758 (p. 31). Andersen (1912, pp. 61, 216) cited the type of *Pteropus* as *P. niger* (Kerr, 1792) (p. 90, published as *Vespertilio vampirus* [sic] *niger*) and recorded Kerr's taxon as included in *Vespertilio vampyrus* Linnaeus. In recent literature (see, for example, G.M. Allen, 1939, pp. 59, 60; Ellerman & Morrison-Scott, 1951, p. 93; Corbet, 1978, p. 38) the type has been cited as *P. niger* (Kerr) and it is proposed that *Pteropus* Brisson be conserved with this type species, in accord with current usage.

The name *Pteropus* is available from Erxleben (1777, p. 130).

Glis (pp. 13, 113; edible dormouse).

The genus included eight taxonomic species, among them 'glis', based on the description in Ray (1693, p. 229) and on other references. Merriam (1895, p. 376) designated this species as the type under the name *Sciurus glis* Linnaeus, 1766 (p. 87). *Glis* Brisson is the type genus of the family GLIRIDAE Thomas, 1897.

The name *Glis* is available from Erxleben (1777, p. 358) but this refers to marmots, the European species of which have consistently been known as *Marmota* Blumenbach, 1779 (p. 79) (type species *Mus marmota* Linnaeus, 1758, p. 60). To forestall a transfer of the name *Glis* to the marmots, Ellerman (1949, p. 894) designated *Glis zemni* Erxleben, 1777 (p. 370), a spalacid species based on the 'Podolian marmot' of Pennant (1771, p. 277) which was included in *Glis* Erxleben, as the type of the latter. The designation rendered *Glis* Erxleben a junior subjective synonym of the mole rat name *Spalax* Güldenstaedt, 1770 (p. 410). The name *Myoxus* Zimmermann, 1780 (p. 351; Zimmermann's work was placed on the Official List in Opinion 257, August 1954), a junior objective synonym of *Glis* Brisson, was used by some early authors and has recently been adopted by some American (e.g. Wahlert, Sawitzke & Holden, 1993), but not European, authors. Ellerman & Morrison-Scott (1951, p. 547) commented: 'The retention of *Glis* for the Fat Dormouse, as from Brisson, 1762, seems desirable as the name is in almost universal use', and Corbet (1978, p. 144) noted: 'Rejection [of *Glis* Brisson] would make it necessary to use the name *Myoxus* Zimmermann, 1780 for this genus but this seems neither necessary nor desirable'.

Cuniculus (pp. 13, 98; paca).

The genus included nine taxonomic species, described and based on references to earlier authors. Merriam (1895, p. 376) noted that the nominal taxon 'was made up of a heterogeneous assemblage comprising no less than six modern genera and five families of rodents' and gave 'C. cauda longissima Brisson (= *Dipus alactaga* Olivier,

1800)' as the type species. This designation would place *Cuniculus* among the sciurognath rodents; however, it was made by elimination and is therefore invalid. Hollister (1913, p. 79) designated as the type *Cavia paca* (Linnaeus, 1766) (p. 81, originally described as *Mus paca*), a taxonomic species included by Brisson ('paca', p. 99) based on 'Cuniculus major palustris ...' from Barrère (1741) and on other references. Hollister's designation rendered *Cuniculus* a member of the hystricognaths, and this usage of Brisson's name has been adopted by all subsequent authors. *Cuniculus* is the type genus of the family name CUNICULIDAE Miller & Gidley, 1918.

The name *Cuniculus* was included in Gronovius's (1763, p. 4) work but, as noted above, this has been placed on the Official Index as unavailable. The next available use of the name is *Cuniculus* Meyer, 1790 (p. 52). Meyer's genus included *Lepus cuniculus* Linnaeus, 1758 which refers to the European rabbit. *Cuniculus* Wagler, 1830 is a synonym of *Dicrostonyx* Gloger, 1841 (type species *Mus hudsonius* Pallas, 1779), the Arctic lemming. In Opinion 90 (December 1925) *Cuniculus* Brisson was recorded as available but it was noted that 'certain authors do not accept Brissonian names, and for these the name is *Agouti* Lacepède, 1799. Same genotype'. A few authors have adopted the latter name, the first available synonym of *Cuniculus* (see, for example, Cabrera, 1961, p. 594, who however commented [in translation]: 'Most modern authors, with rare exceptions, have used the name *Cuniculus* as of Brisson, 1762, for this genus, in accord with Opinion 90'). Adoption of the name *Agouti* Lacepède, 1799 (p. 9) would be a change from the well-established *Cuniculus* and this has not generally been followed (see para. 6 below). Moreover, Lacepède's name may well cause confusion since it applies to the pacas and not the agoutis of vernacular usage (related South American rodents placed in *Dasyprocta* Illiger, 1811 and *Myoprocta* Thomas, 1903). Still greater confusion would be caused, if *Cuniculus* Brisson were not accepted for the paca, by the adoption of *Cuniculus* Meyer, 1790 (see above) as the valid name for the European rabbit, currently universally known as *Oryctolagus* Lilljeborg, 1874 (p. 417; type species by original designation *Lepus cuniculus* Linnaeus, 1758, p. 58). Wilson & Reeder (Eds., 1993) used the name *Oryctolagus* and cited *Cuniculus* Meyer as a synonym.

Hydrochoerus (pp. 12, 80; capybara).

The genus included a single described taxonomic species 'hydrochoerus', based on 'Capybara Brasiliensibus: porcus fluviatilis' from Ray (1693, p. 126) and on other references. Merriam (1895, p. 376) designated this as the type under the name *Sus hydrochaeris* Linnaeus, 1766 (p. 103).

The generic name is available, spelt '*Hydrochaeris*', by description (p. 44) in Brünnich's (1771) work, which was placed on the Official List in Opinion 236 (May 1954). No species were included in Brünnich's work. The name was spelt '*Hydrochaerus*' by Erxleben (1777, p. 191) and Boddaert (1785, pp. 51, 161).

Meles (pp. 13, 183; badger).

The genus was described with four included taxonomic species, which were described and based on references to earlier authors. Merriam (1895, p. 376) designated *Ursus meles* Linnaeus, 1758 (p. 48) as the type species; 'meles' was included in the genus by Brisson, based on 'Meles unguibus anticis longissimis' from Linnaeus (1746, 1748) and on other references.

The name *Meles* appears in Storr (1780, p. 34 and table A, spelt 'Melis') but is a nomen nudum (see Hopwood, 1947, p. 535 and Ellerman & Morrison-Scott, 1951, p. 3). It is not available from Hasselquist (1762, p. 271) (Hasselquist's work was rejected by the Commission in Opinion 57, March 1914 and Direction 32, May 1956), but is available from Boddaert (1785, pp. 45, 80). The junior synonym *Taxus* Cuvier & Geoffroy Saint-Hilaire, 1795 (pp. 184, 187; based on *Ursus meles* Linnaeus), and its replacement *Melesium* Rafinesque, 1815 (p. 59), have never been used.

Lutra (pp. 13, 201; otter).

The genus included two taxonomic species. Merriam (1895, p. 376) designated *Mustela lutra* Linnaeus, 1758 (p. 45) as the type species; 'lutra' was described by Brisson, based on 'Lutra digitis aequalibus' from Linnaeus (1746, 1748) and on other references. The second of Brisson's species, 'L. brasiliensis', based on 'Lutra pollice digitis breviore' from Linnaeus (1748), was recorded on the Official Index in Direction 79 (October 1957) as being unavailable.

The name *Lutra* is available from Brünnich (1771, p. 42) and Boddaert (1785, pp. 53, 167).

Hyaena (pp. 13, 169; striped and brown hyaenas).

The genus included a single taxonomic species 'hyaena', which was described and based on 'Canis pilis cervicis erectis longioribus' from Linnaeus (1748) and on other references. Merriam (1895, p. 376) designated this species as the type under the name *Canis hyaena* Linnaeus, 1758 (p. 40).

The name *Hyaena* is available from Brünnich (1771, p. 42). *Euhyaena* Falconer, 1868 (p. 464) is a junior synonym based on *Canis hyaena* Linnaeus.

Tapirus (pp. 12, 81; tapir).

The genus included a single taxonomic species 'tapirus', which was described and based on 'Sus aquaticus multisulcus' from Barrère (1741) and on other references. This species was designated the type by Merriam (1895, p. 376) under the name *Hippopotamus terrestris* Linnaeus, 1758 (p. 74).

The generic name is available from Brünnich (1771, p. 44). The name *Rhinochoerus* Wagler, 1830 (p. 17) is a junior synonym of *Tapirus* Brisson.

Tragulus (pp. 12, 65; chevrotain).

The genus included five taxonomic species, only the first of which referred to *Tragulus* as currently used. The genus is the type of the family TRAGULIDAE Milne Edwards, 1864.

The name *Tragulus* was used by Pallas (1767, p. 6) and has been cited with his authorship by some workers. Both Brisson (1762) and Pallas (1767) described the taxon as hornless in both sexes and with prominent canines in the upper jaw. However, the single species included by Pallas (by which his generic name was made available) was *Capra pygmea* Linnaeus, 1758 (p. 69), which had been described as having horns. Linnaeus (1766, p. 92) doubtfully included *pygmaeus* [sic] in *Moschus* Linnaeus, 1758 (also hornless; family CERVIDAE or MOSCHIDAE). The species is currently known as *Neotragus pygmaeus*, the Royal antelope (family BOVIDAE).

Boddaert (1785, pp. 49, 131) described *Tragulus* as hornless but also included *Capra pygmea* in the genus. Hopwood (1947, p. 535) designated *pygmea* as the type species of Boddaert's taxon, thereby placing *Tragulus* Boddaert in the BOVIDAE.

Merriam (1895, p. 375) designated 'Tragulus indicus Brisson = *Capra pygmea* Linnaeus, 1758' as the type species of *Tragulus*. The taxonomic species 'indicus' was included in the genus by Brisson based on 'Capra pedibus digito humano angustioribus' from Linnaeus (1748) and on other references. Ellerman & Morrison-Scott (1951, p. 349) considered 'indicus' to be of uncertain identity and designated *Cervus javanicus* Osbeck, 1765 (p. 357) as the type. It is proposed that *Tragulus* Brisson be conserved with *javanicus* as the type species, in accord with accepted usage.

Giraffa (pp. 12, 37; giraffe).

The genus included a single taxonomic species 'giraffa', based on 'Cervus cornibus simplicissimis, pedibus anticis longissimis' from Linnaeus (1748) and on other references. Merriam (1895, p. 375) designated this, under the name *Cervus camelopardalis* Linnaeus, 1758 (p. 66), as the type species.

The name *Giraffa* is available from Brünnich (1771, p. 46).

6. It is of interest that the name of the Order Cetacea dates from Brisson (1762), but names above the family-group level are not covered by the Code.

7. Brisson's (1762) generic names were listed as available by Sherborn (1902) and Neave (1939–1940) and accepted by Simpson (1945). They have been used for more than 230 years and have appeared extensively in field guides and ecological and conservation literature, as well as in taxonomic publications on both Recent and fossil fauna. The names have been widely cited, attributed to Brisson (1762), in many standard works of reference; these include Gray (1843), Elliot (1907), G.M. Allen (1939), Chasen (1940), Poole & Schantz (1942), Ellerman & Morrison-Scott (1951), Roberts (1951), Ellerman, Morrison-Scott & Hayman (1953), Laurie & Hall (1954), Grassé (1955), Gromova (1962), Haltenorth (1963), Heptner & Naumov (1966–1980), Meester & Setzer (1971–1978), Sokolov (1973, 1979), Medway (1977), Corbet (1978), Niethammer & Krapp (1978), Smithers (1983), Nowak & Paradiso (1983, some names), Anderson & Jones (1984, some names), Nowak (1991, some names), Harrison & Bates (1991, some names), Corbet & Hill (1991, 1992). In rejecting Brisson's names Honacki et al. (1984) and Wilson & Reeder (1993) cited Hopwood (1947) (see para. 3 above) but overlooked the two centuries' usage of the names and, in particular, the works of Ellerman & Morrison-Scott (1951) and Corbet (1978) where the continued use of Brisson's names was recommended for the sake of stability. Moreover, in rejecting Brisson's names Honacki et al. (1984) and Wilson & Reeder (1993) have not uniformly implemented the logical consequential changes in other names.

8. At the same time as conserving the 11 generic names recorded in this application, to avoid any uncertainty in the future it is proposed that Brisson's (1762) *Regnum Animale* ... be rejected for nomenclatural purposes. It is proposed that only the 11 generic names be made available (together with *Odobenus* already conserved in Opinion 467); it is not intended that specific names, the fixation of type species or the inclusion of nominal species within the genera be taken from Brisson's work. Since the type species designations noted above (para. 5) may not be the earliest or

be valid under the modern Code it is proposed that the accepted type for each genus be protected by designation under the Commission's plenary powers.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to rule that the work by M.J. Brisson (1762) entitled *Regnum Animale in classes IX distributum, sive synopsis methodica* is rejected for nomenclatural purposes;

(2) to use its plenary powers:

(a) to rule that the following generic names are available from Brisson (1762) despite having been published in a suppressed work:

(i) *Philander*;
(ii) *Pteropus*;
(iii) *Glis*;
(iv) *Cuniculus*;
(v) *Hydrochoerus*;
(vi) *Meles*;
(vii) *Lutra*;
(viii) *Hyaena*;
(ix) *Tapirus*;
(x) *Tragulus*;
(xi) *Giraffa*;

(b) to set aside all previous type species fixations for the following genera and to make the designations shown:

(i) *Philander* Brisson, 1762 and to designate *Didelphis opossum* Linnaeus, 1758 as the type species;
(ii) *Pteropus* Brisson, 1762 and to designate *Vespertilio niger* Kerr, 1792 as the type species;
(iii) *Glis* Brisson, 1762 and to designate *Sciurus glis* Linnaeus, 1766 as the type species;
(iv) *Cuniculus* Brisson, 1762 and to designate *Mus paca* Linnaeus, 1766 as the type species;
(v) *Hydrochoerus* Brisson, 1762 and to designate *Sus hydrochaeris* Linnaeus, 1766 as the type species;
(vi) *Meles* Brisson, 1762 and to designate *Ursus meles* Linnaeus, 1758 as the type species;
(vii) *Lutra* Brisson, 1762 and to designate *Mustela lutra* Linnaeus, 1758 as the type species;
(viii) *Hyaena* Brisson, 1762 and to designate *Canis hyaena* Linnaeus, 1758 as the type species;
(ix) *Tapirus* Brisson, 1762 and to designate *Hippopotamus terrestris* Linnaeus, 1758 as the type species;
(x) *Tragulus* Brisson, 1762 and to designate *Cervus javanicus* Osbeck, 1765 as the type species;
(xi) *Giraffa* Brisson, 1762 and to designate *Cervus camelopardalis* Linnaeus, 1758 as the type species;

(3) to place on the Official List of Generic Names in Zoology the following names:

(a) *Philander* Brisson, 1762 (gender: masculine), type species by designation in (2)(b)(i) above *Didelphis opossum* Linnaeus, 1758;

(b) *Pteropus* Brisson, 1762 (gender: masculine), type species by designation in (2)(b)(ii) above *Vespertilio niger* Kerr, 1792;
(c) *Glis* Brisson, 1762 (gender: masculine), type species by designation in (2)(b)(iii) above *Sciurus glis* Linnaeus, 1766;
(d) *Cuniculus* Brisson, 1762 (gender: masculine), type species by designation in (2)(b)(iv) above *Mus paca* Linnaeus, 1766;
(e) *Hydrochoerus* Brisson, 1762 (gender: masculine), type species by designation in (2)(b)(v) above *Sus hydrochaeris* Linnaeus, 1766;
(f) *Meles* Brisson, 1762 (gender: masculine), type species by designation in (2)(b)(vi) above *Ursus meles* Linnaeus, 1758;
(g) *Lutra* Brisson, 1762 (gender: feminine), type species by designation in (2)(b)(vii) above *Mustela lutra* Linnaeus, 1758;
(h) *Hyaena* Brisson, 1762 (gender: feminine), type species by designation in (2)(b)(viii) above *Canis hyaena* Linnaeus, 1758;
(i) *Tapirus*, Brisson 1762 (gender: masculine), type species by designation in (2)(b)(ix) above *Hippopotamus terrestris* Linnaeus, 1758;
(j) *Tragulus* Brisson, 1762 (gender: masculine), type species by designation in (2)(b)(x) above *Cervus javanicus* Osbeck, 1765;
(k) *Giraffa* Brisson, 1762 (gender: feminine), type species by designation in (2)(b)(xi) above *Cervus camelopardalis* Linnaeus, 1758;

(4) to place on the Official List of Specific Names the following names:
(a) *opossum* Linnaeus, 1758, as published in the binomen *Didelphis opossum* (specific name of the type species of *Philander* Brisson, 1762);
(b) *niger* Kerr, 1792, as published in the trinomen *Vespertilio vampirus niger* (specific name of the type species of *Pteropus* Brisson, 1762);
(c) *glis* Linnaeus, 1766, as published in the binomen *Sciurus glis* (specific name of the type species of *Glis* Brisson, 1762);
(d) *paca* Linnaeus, 1766, as published in the binomen *Mus paca* (specific name of the type species of *Cuniculus* Brisson, 1762);
(e) *hydrochaeris* Linnaeus, 1766, as published in the binomen *Sus hydrochaeris* (specific name of the type species of *Hydrochoerus* Brisson, 1762);
(f) *meles* Linnaeus, 1758, as published in the binomen *Ursus meles* (specific name of the type species of *Meles* Brisson, 1762);
(g) *lutra* Linnaeus, 1758, as published in the binomen *Mustela lutra* (specific name of the type species of *Lutra* Brisson, 1762);
(h) *hyaena* Linnaeus, 1758, as published in the binomen *Canis hyaena* (specific name of the type species of *Hyaena* Brisson, 1762);
(i) *terrestris* Linnaeus, 1758, as published in the binomen *Hippopotamus terrestris* (specific name of the type species of *Tapirus* Brisson, 1762);
(j) *javanicus* Osbeck, 1765, as published in the binomen *Cervus javanicus* (specific name of the type species of *Tragulus* Brisson, 1762);
(k) *camelopardalis* Linnaeus, 1758, as published in the binomen *Cervus camelopardalis* (specific name of the type species of *Giraffa* Brisson, 1762);

(5) to place on the Official Index of Rejected and Invalid Works in Zoological Nomenclature the work entitled *Regnum Animale in classes IX distributum, sive synopsis methodica* by M.J. Brisson (1762), as rejected in (1) above;

(6) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
(a) *Myoxus* Zimmermann, 1780 (a junior objective synonym of *Glis* Brisson, 1762);
(b) *Agouti* Lacepède, 1799 (a junior objective synonym of *Cuniculus* Brisson, 1762);
(c) *Cuniculus* Meyer, 1790 (a junior homonym of *Cuniculus* Brisson, 1762);
(d) *Cuniculus* Wagler, 1830 (a junior homonym of *Cuniculus* Brisson, 1762);
(e) *Taxus* Cuvier & Geoffroy Saint-Hilaire, 1795 (a junior objective synonym of *Meles* Brisson, 1762);
(f) *Melesium* Rafinesque, 1815 (a junior objective synonym of *Meles* Brisson, 1762);
(g) *Euhyaena* Falconer, 1868 (a junior objective synonym of *Hyaena* Brisson, 1762);
(h) *Tragulus* Pallas, 1767 (a junior homonym of *Tragulus* Brisson, 1762);
(i) *Tragulus* Boddaert, 1785 (a junior homonym of *Tragulus* Brisson, 1762).

References

Allen, G.M. 1939. A checklist of African mammals. *Bulletin of the Museum of Comparative Zoology, Harvard College*, **83**: 1–763.

Allen, J.A. 1900. Note on the generic names *Didelphis* and *Philander*. *Bulletin of the American Museum of Natural History*, **13**: 185–190.

Andersen, K. 1912. *Catalogue of the Chiroptera in the collection of the British Museum*, Ed. 2, vol. 1 (Megachiroptera). ci, 854 pp. British Museum, London.

Anderson, S. & Jones, J.K. (Eds.). 1984. *Orders and families of recent mammals of the world*. xii, 686 pp. Wiley, New York.

Barrère, P. 1741. *Essai sur l'histoire naturelle de la France équinoxiale* ... xxiv, 215 pp. Paris.

Blumenbach, J.F. 1779. *Handbuch der Naturgeschichte*. [12], 447 pp., 2 pls. Göttingen.

Boddaert, P. 1785. *Elenchus Animalium*, vol. 1 (Sistens Quadrupedia). Pp. 43–174. Rotterdam.

Brisson, M.J. 1756. *Regnum Animale in classes IX distributum, sive synopsis methodica* ... vi, 382 pp. Bauche, Paris.

Brisson, M.J. 1760. *Ornithologia sive synopsis methodica sistens Avium divisionem in ordines*. 6 vols. Bauche, Paris.

Brisson, M.J. 1762. *Regnum Animale in classes IX distributum, sive synopsis methodica* ..., Ed. 2. 296 pp. Haak, Leiden.

Brünnich, M.T. 1771. *Zoologiae Fundamenta*. 254 pp. Hafniae et Lipsiae.

Cabrera, A. 1961. Catalogo de los mamiferos de America del Sur. *Revista del Museo Argentino de Ciencias Naturales 'Bernardino Rivadavia', Ciencias Zoológicas, part 2*, **4**: 308–732.

Chasen, F.N. 1940. A handlist of Malaysian mammals. *Bulletin of the Raffles Museum, Singapore, Straits Settlement*, **15**: 1–209.

Collins, L.R. 1973. *Monotremes and marsupials. A reference for zoological institutions*. v, 323 pp. Smithsonian Institution, Washington.

Corbet, G.B. 1978. *The mammals of the Palaearctic region: a taxonomic review*. 314 pp. British Museum (Natural History), London.

Corbet, G.B. & Hill, J.E. 1991. *A world list of mammalian species*, Ed. 3. viii, 243 pp. Natural History Museum, London.

Corbet, G.B. & Hill, J.E. 1992. *The mammals of the Indomalayan region: a systematic review*. 488 pp., 45 figs., 177 maps. Natural History Museum, London.

Cuvier, G.F. & Geoffroy Saint-Hilaire, E. 1795. Mammalogie. Mémoire sur une nouvelle division des Mammifères. *Magazin Encyclopédique*, **2**: 165–190.

Ellerman, J.R. 1949. On the prior name for the Siberian lemming and the genotype of *Glis* Erxleben. *Annals and Magazine of Natural History*, (12)**2**(23): 894.

Ellerman, J.R. & Morrison-Scott, T.C.S. 1951. *Checklist of Palaearctic and Indian mammals 1758 to 1946*. 810 pp. British Museum (Natural History), London.

Ellerman, J.R., Morrison-Scott, T.C.S. & Hayman, R.W. 1953. *Southern African Mammals 1758–1951. A reclassification*. 363 pp. British Museum (Natural History), London.

Elliot, D.G. 1907. A catalogue of the collection of mammals in the Field Columbian Museum. *Field Museum of Natural History, Zoological Series*, **8**: 1–694 (Publication 115).

Erxleben, J.C.B. 1777. *Systema regni animalis* ... Classis 1 (Mammalia). Lipsiae.

Falconer, H. 1868. *Palaeontological memoirs and notes*, vol. 2. xiii, 675 pp., 38 pls. Hardwicke, London.

Gardner, A.L. 1981. Review. Husson, A.M., *The mammals of Surinam. Journal of Mammalogy*, **62**(2): 445–448.

Grassé, P.-P. (Ed.). 1955. *Traité de Zoologie. Anatomie, Systématique, Biologie*, vol. 17 (Mammifères. Les Ordres: anatomie, éthologie, systématique). Part 1 (pp. 1–1170), part 2 (pp. 1171–2300). Masson, Paris.

Gray, J.E. 1843. *List of Mammalia in the collection in the British Museum*. xxviii, 216 pp. British Museum, London.

Gromova, V.I. (Vol. Ed.). 1962. *Fundamentals of Paleontology*, vol. 13 (Mammals). 421 pp. USSR Academy of Sciences, Moscow. [In Russian; English translation by the Israel Program for Scientific Translations. vi, 585 pp. Jerusalem. 1968].

Gronovius, L.T. 1763. *Zoophylacium Gronovianum, exhibens animalia*, part 1 (Animalia quadrupeda, Amphibia atquae Pisces). Pp. 1–136. Haak, Leiden.

Güldenstaedt, A.I. 1770. *Spalax*, novum glirium genus. *Novi Commentarii Academiae Imperialis Petropolitanae*, **14**(1): 409–440.

Hall, E.R. 1981. *The mammals of North America*, Ed. 2, vol. 1. Pp. 1–600, 90. Wiley, New York.

Haltenorth, T. 1963. Klassifikation der Saugetiere: Artiodactyla 1(18). *Handbuch der Zoologie*, **8**(32): 1–167.

Harrison, D.L. & Bates, P.J.J. 1991. *The mammals of Arabia*, Ed. 2. xvi, 354 pp. Harrison Zoological Museum, Sevenoaks.

Hasselquist, F. 1762. *D. Friedrich Hasselquists ... Reise nach Palästina in den Jahren von 1749 bis 1752. Herausgegeben von Carl Linnaeus ... Aus dem Schwedischen* (by T.H. Gadebusch). [xviii], 606 pp. Rostock.

Heptner, V.G. & Naumov, N.P. (Eds.). 1966–1980. *Die Säugetiere der Sowjetunion*. 3 vols. Fischer, Jena.

Hershkovitz, P. 1949. Generic names of the four-eyed opossum and the woolly opossum (Didelphidae). *Proceedings of the Biological Society of Washington*, **62**: 11–12.

Hollister, N. 1913. The type species of *Cuniculus* Brisson. *Proceedings of the Biological Society of Washington*, **26**: 79.

Honacki, J.H., Kinman, K.E. & Koeppl, J.W. (Eds.). 1982. *Mammal species of the world*. ix, 694 pp. Allen Press, Lawrence, Kansas.

Hopwood, A.T. 1947. The generic names of the mandrill and baboons, with notes on some of the genera of Brisson, 1762. *Proceedings of the Zoological Society of London*, **117**(2,3): 533–536.

Husson, A.M. 1978. *The mammals of Surinam*. xxxiv, 569 pp., 161 pls. Brill, Leiden.

Kerr, R. 1792. *The animal kingdom or zoological system of the celebrated Sir Charles Linnaeus. Class 1, Mammalia*. xli, 644 pp. Murray, London.

Lacepède, B.G.É. 1799. *Tableau des divisions, sous-divisions, ordres et genres des mammifères*. 20 pp. *in*: *Discours de l'ouverture et de clôture du cours d'Histoire Naturelle donné dans le Muséum National d'Histoire Naturelle ..., l'an VII de la République, et Tableaux méthodiques des Mammifères et des Oiseaux*. 55, 18, 20 pp. Plassen, Paris.

Laurie, E.M.O. & Hill, J.E. 1954. *List of the land mammals of New Guinea, Celebes and adjacent islands 1758–1952*. 175 pp., 3 pls. British Museum (Natural History), London.

Lilljeborg, W. 1874. *Fauna Öfver Sveriges och Norges Ryggradsdjur*, vol. 1 (Däggdjuren). xii, 550 pp. Schultz, Upsala.

Linnaeus, C. 1746. *Fauna Suecica* ... 26, 411 pp. Salvii, Stockholmiae.

Linnaeus, C. 1748. *Systema naturae*, Ed. 6. 824 pp. Salvii, Holmiae.

Linnaeus, C. 1758. *Systema naturae*, Ed. 10, vol. 1. 824 pp. Salvii, Holmiae.

Linnaeus, C. 1766. *Systema naturae*, Ed. 12, vol. 1. 532 pp. Laurentii Salvii, Holmiae.

Matschie, P. 1916. Bemerkungen über die Gattung *Didelphis* L. *Sitzungberichte der Gesellschaft Naturforschender Freunde zu Berlin*, **1916**: 259–272.

Medway, Lord. 1977. *Mammals of Borneo: field keys and an annotated checklist*. xii, 172 pp. Malaysian Branch Royal Asiatic Society (monograph no. 7), Kuala Lumpur.

Meester, J. & Setzer, H.W. (Eds.). 1971–1978. *The mammals of Africa. An identification manual*. 5 parts. Smithsonian Institution Washington.

Merriam, C.H. 1895. Brisson's genera of mammals, 1762. *Science*, n.s., **1**(14): 375–376.

Meyer, U.U. 1790. *Magazin für Thiergeschichte, Thieranatomie und Thierarzneykunde*, vol. 1, part 1. Göttingen.

Neave, S.A. 1939–1940. *Nomenclator Zoologicus*. 4 vols. Zoological Society of London, London.

Niethammer, J. & Krapp, F. (Eds.). 1978. *Handbuch der Säugetiere Europas*. Akademische Verlagsgesellschaft, Wiesbaden.

Nowak, R.M. (Ed.). 1991. *Walker's mammals of the world*, Ed. 5. 1629 pp. (in 2 vols.). Johns Hopkins University Press, Baltimore & London.

Nowak, R.M. & Paradiso, J.L. (Eds.). 1983. *Walker's mammals of the world*, Ed. 4, vol. 2. xxv, 1362 pp. Johns Hopkins University Press, Baltimore.

Osbeck, P. 1765. *Reisenach Ostindien und China*, Ed. 2. xxiv, 552 pp., 13 pls. Rostock.

Pallas, P.S. 1767. *Spicilegia Zoologica*, fasc. 1. 44 pp., 3 pls. Berlin.

Pennant, J. 1771. *Synopsis of quadrupeds*. xxv, 382 pp. Chester.

Pine, R.H. 1973. Anatomical and nomenclatural notes on opossums. *Proceedings of the Biological Society of Washington*, **86**(33): 391–402.

Poole, A.J. & Schantz, V.S. 1942. Catalog of the type specimens of mammals in the U.S. National Museum, including the Biological Surveys collection. *Bulletin Smithsonian Institution*, **178**: 1–705.

Rafinesque, C.S. 1815. *Analyse de la nature ...* 214 pp. Author, Palermo.

Ray, J. 1693. *Synopsis methodica animalium Quadrupedum et Serpentini generis*. 336 pp.

Roberts, A. 1951. *The mammals of South Africa*. xlviii, 701 pp., 46 pls. The Mammals of South Africa Book Fund, Johannesburg.

Sherborn, C.D. 1902. *Index animalium ... Sectio prima*. lix, 1195 pp. Cambridge University Press, Cambridge.

Simpson, G.G. 1945. The principles of classification and a classification of mammals. *Bulletin of the American Museum of Natural History*, **85**: 1–350.

Smithers, R.H.N. 1983. *The mammals of the southern African subregion*. xxii, 736 pp. University of Pretoria, Pretoria.

Sokolov, V.E. 1973, 1979. *Systematics of mammals*. Vol. 1, 430 pp. (1973); vol. 2, 529 pp. (1979). Vusshaya Shkola, Moscow. [In Russian].

Storr, G.C.C. 1780. *Prodromus methodi mammalium*. 43 pp., 3 tables. Tübingen.

Tate, G.H.H. 1939. The mammals of the Guiana Region. *Bulletin of the American Museum of Natural History*, **76**: 151–229.

Tiedemann, D.F. 1808. *Zoologie*, vol. 1 (Allgemeine Zoologie, Mensch und Säugthiere). xvi, 610 pp. Landshut.

Trouessart, E.L. 1897–1899. *Catalogus Mammalium tam viventium quam fossilium. Nova Editio (Prima Completa)*. Vol. 1, pp. i–vi, 1–664; vol. 2, pp. 665–1469. Friedländer, Berlin.

Wagler, J. 1830. *Natürliches System der Amphibien, mit vorangehender Classification der Säugthiere und Vögel*. vi, 354 pp. Cotta, Münich.

Wahlert, J.H., Sawitzke, S.L. & Holden, M.E. 1993. Cranial anatomy and relationships of dormice (Rodentia, Myoxidae). *American Museum Novitates*, **1993**(3061): 1–32.

Wilson, D.E. & Reeder, D.A.M. (Eds.). 1993. *Mammal species of the world. A taxonomic and geographic reference*, Ed. 2. xviii, 1206 pp. Smithsonian Institution Press, Washington & London.

Zimmermann, A.E.W. von. 1780. *Geographische Geschichte des Menschen, und der allgemein verbreiteten vierfüssigen Thiere*, vol. 2. 432 pp. Leipzig.

Comment on the proposed attribution of the specific name of *Ceratites nodosus* to Schlotheim, 1813, and the proposed designation of a lectotype (Cephalopoda, Ammonoidea)

(Case 2732; BZN **48**: 31–35, 246; **49**: 145–149, 290; **50**: 54–56, 141–142, 229–231, 284–285)

E.T. Tozer
Geological Survey of Canada, 100 West Pender Street, Vancouver, British Columbia, Canada V6B 1R8

No less than eight persons have now commented on Urlichs's proposal that authorship of *Ceratites nodosus* be attributed to Schlotheim (1813) instead of Bruguière (1789) and that a specimen from the Schlotheim collection (MB: C 785) illustrated for the first time in 1987 be accepted as the lectotype.

Significantly most of those supporting Urlichs (Hahn, Horn, Strauch, Bertling, Lehmann) are from Germany, where ammonoids generally identified as *Ceratites nodosus* are index fossils in the upper part of the Middle Triassic Muschelkalk formation. The presence of these index fossils provides the foundation for a stratigraphic division — the *Ceratites nodosus* Zone. Those supporting Urlichs believe that he is right in claiming that his proposed lectotype for *Ceratites nodosus* conforms with established usage and is an example of a species that characterizes the *Ceratites nodosus* Zone. They also accept Urlichs's opinion that the lectotype of *Ceratites nodosus* Bruguière (PIMUZ L/1651), chosen by Rieber & Tozer in 1986, is different from the species in the *Ceratites nodosus* Zone. PIMUZ L/1651, in Urlichs's opinion, is a species found in a lower part of the Muschelkalk. According to Urlichs's interpretation, acceptance of the Rieber & Tozer proposal would mean that *Ceratites nodosus* does not occur in the *Ceratites nodosus* Zone. This would necessitate giving a new name to the Zone and would thus disrupt the current stratigraphic terminology in Germany. Understandably the geologists do not view this propect with favour.

Opposition to Urlichs's proposal has been expressed by the late Richard Melville, N.J. Silberling and the writer. Our objections addressed the question solely from a zoological standpoint. I maintain that from this standpoint our arguments are unassailable. Nobody questions that PIMUZ L/1651 is the specimen on which *Ammonites nodosa* Bruguière, and hence *Ceratites nodosus*, is based. According to Urlichs, current usage of *Ceratites nodosus* in Germany was established by Schlotheim and perpetuated by Philippi in 1901. This view cannot be supported. Schlotheim illustrated only one specimen of what he called *Ammonites nodosus*. Philippi regarded this specimen as a representative of *Ceratites nodosus*. Urlichs has located this specimen but he identifies it as *Ceratites* (*Acanthoceratites*) *spinosus spinosus* Philippi, 1901, not as *Ceratites nodosus*. Schlotheim published no illustration that conforms with Urlichs's concept of *Ceratites nodosus*. Urlichs's usage of *Ceratites nodosus* was clearly given in 1987, but not before.

Concerning use of the name *Ceratites nodosus*, students of Muschelkalk ammonoid stratigraphy seem comparable with Humpty Dumpty: 'When I use a word ... it means just what I choose it to mean — neither more nor less' (*Alice through the Looking Glass*, Lewis Carroll, 1871).

I still maintain that according to the rules of zoological nomenclature it is wrong for the Commission to sanction a taxon named *Ceratites nodosus* attributed to Schlotheim. Schotheim did not propose a new taxon. It is only Urlichs's opinion that the proposed lectotype for '*Ceratites nodosus* (Schlotheim)' corresponds with Schlotheim's concept of the species. As explained above, there is, in fact, greater justification for regarding the taxon identified by Urlichs as '*Ceratites* (*Acanthoceratites*) *spinosus spinosus* Philippi, 1901' as representing Schlotheim's interpretation of *Ammonites nodosa*. In this light, if one accepts Urlichs's identification, if any ammonoid deserves to be called *Ceratites nodosus* (Schlotheim), it is *Ceratites* (*Acanthoceratites*) *spinosus spinosus* Philippi.

If the question was purely of a zoological nature it would seem a straightforward matter for the Commission to rule that the proper name for the taxon is *Ceratites nodosus* (Bruguière) with PIMUZ L/1651 as lectotype. This case has been made by Melville, Silberling and the writer. Nothing written by Urlichs and his colleagues from Germany and Austria refutes our arguments.

The zoological importance of the decision stems from the fact that *Ammonites nodosa* Bruguière, 1789 is the type species for the genus *Ceratites* de Haan, 1825. Designation was by J.P. Smith in 1904. As recognized by Urlichs (para. 7 of his application) Smith's designation refers to a non-existent figure but this has never been taken to invalidate the designation.

Acceptance of Urlichs's proposals would mean that the specimen on which the definition of the genus *Ceratites* depends is MB: C 785, not PIMUZ L/1651.

The geological importance of the decision relates to the desire of German geologists to retain the name *Ceratites nodosus* for the ammonoids that characterize the *Ceratites nodosus* stratigraphic zone.

Hence the problem: the ammonoids of the *Ceratites nodosus* Zone are identified by Urlichs as being of a different species compared with the Rieber & Tozer lectotype for *Ceratites nodosus* (Bruguière). Thus the straight forward zoological case cannot be reconciled with the stratigraphic nomenclature advocated by Urlichs and his colleagues. Acceptance of Urlichs's proposal requires that geological considerations take priority over zoological rules.

Throughout this debate I have been reluctant to accept Urlichs's proposal because it necessitates bending the rules of zoological nomenclature to accommodate his opinions on the identification of the ammonoids in question in order that they agree with the conventional stratigraphic terminology in the Muschelkalk Formation.

The important consideration is that a clear unambiguous definition of the genus *Ceratites* should emerge as a result of the Commission's ruling. In my opinion the definition of the genus *Ceratites* will be much the same whether the type species be *Ceratites nodosus* (Bruguière) (sensu Rieber & Tozer) or *Ceratites nodosus* (Schlotheim) (sensu Urlichs & Mundlos). The ammonoids in question are sufficiently similar that I do not anticipate the introduction of problems concerning the interpretation of the genus *Ceratites* if Urlichs's proposal is accepted by the Commission.

Although in the matter of zoological nomenclature geological arguments should presumably be subordinate to the zoological facts, possibly the Commission may nevertheless give priority to the geological arguments in this case and thus stabilize both the zoological and geological interpretation of the genus *Ceratites*.

I therefore now withdraw opposition to Urlichs's proposal. Withdrawal of my opposition should not be construed as withdrawal of the facts and opinions expressed in my previous comment (BZN **49**: 145–149), or my full agreement with the submissions by Richard Melville (BZN **50**: 55–56) and N.J. Silberling (BZN **50**: 141–142). I am simply adopting the position that in this case geological considerations be allowed to override the zoological rules. I take this position, which will satisfy the German geologists, only because acceptance of Urlichs's proposal, although contrary to the rules, in my opinion will not result in a radical change in the zoological interpretation of the genus *Ceratites*.

Comments on the proposed conservation of *Hydromantes* Gistel, 1848 by the designation of *Salamandra genei* Temminck & Schlegel, 1838 as the type species (Amphibia, Caudata)
(Case 2868; see BZN **50**: 219–223)

(1) Mark R. Jennings
Fish and Wildlife Service, National Ecology Research Center, United States Department of the Interior, 1830 Sharon Avenue, Davis, California 95616, U.S.A. and *Department of Herpetology, California Academy of Sciences, California, U.S.A.*

I write to support the application submitted by Prof Hobart Smith & Dr David Wake.

I have been involved in a number of projects dealing with the genus *Hydromantes* in California over the past decade — everything from check lists (e.g. Jennings, 1983) to the current status of *H. platycephalus* in the State (Jennings & Hayes, in press) — and I believe that the replacement of this long-established generic name by *Hydromantoides* would cause needless confusion amongst professionals and the lay public.

Looking through my own library resources, I find that I have over 40 pieces of primary literature, field guides, popular publications and agency reports dealing with this genus. Only three publications (Camp, 1916; Lanza & Vanni, 1981; and Dubois, 1984) do not utilize the name *Hydromantes*. Because of the importance of this salamander to land management agencies in California (both *H. brunus* and *H. shastae* are listed by the State of California as threatened; *H. platycephalus* and an undescribed species of *Hydromantes* from the Owens Valley are also protected by other State Laws) and its presence in a number of State and National Parks where it is showcased (e.g. Merced River Canyon Ecological Reserve, Yosemite National Park), it is desirable to prevent certain confusion in future reports, public interpretation materials and press releases and to continue to use the name *Hydromantes* for these web-toed salamanders.

I would also like to point out that, because of its uniqueness and limited distribution, *Hydromantes* (especially *H. platycephalus*) is represented in a large number of museum collections around the world. My own data base indicates 475 specimens scattered amongst 22 collections. Changing all the specimen name records in these collections would seem to be a pointless task. The best mode of action would be for the Commission to approve the application and thus negate the need for such a task.

Additional references

Jennings, M.R. 1983. An annotated check list of the amphibians and reptiles of California. *California Fish and Game*, **69**(3): 151–171.

Jennings, M.R. & Hayes, M.P. (In press). *Amphibian and reptile species of special concern in California.* California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California. Final Report Under Contract (8023).

(2) Harold A. Dundee

Department of Ecology, Evolution and Organismal Biology, 310 Dinwiddie Hall, Tulane University, New Orleans, Louisiana 70118–5698, U.S.A.

Smith & Wake noted that Gistel (1848) used a replacement name *Hydromantes* for *Geotriton*, and that Tschudi (1838) used *Geotriton genei*, a name he attributed to Bonaparte but which was made available (as *Salamandra genei*) by Temminck & Schlegel (1838). Although the name *Hydromantes* was not used until Dunn (1923), the post-Dunn usage of *Hydromantes* has been persistent and voluminous. To change this will only create confusion and delay in the retrieval of literature information for current and future studies. Name stability, as used in the sophisticated studies of recent decades, becomes paramount for systematists. The recommendations of Smith & Wake seem most compelling and I therefore strongly support the application.

(3) Giorgio Mancino

Dipartimento di Fisiologia e Biochimica, Sezione di Biologia Cellulare e dello Sviluppo, Università degli Studi di Pisa, Via Carducci 13, 56010 Ghezzano, Italy

Replacement of the name *Hydromantes* would cause great confusion and in this case stability should be allowed to override priority. Moreover, in my opinion, so far there is insufficient genetic (e.g. hybridological) and cytogenetic (e.g. meiotic abnormalities in species hybrids) evidence to permit the splitting of the genus *Hydromantes* into two different genera (*Hydromantes* and *Hydromantoides*). Zoologists should continue to use the name *Hydromantes* for both the Californian and European populations until there is further morpho-anatomical, physiological, genetical and genomical, as well as etho-ecological, evidence.

(4) Benedetto Lanza

Dipartimento di Biologia Animale e Genetica 'Leo Pardi', Università degli Studi di Firenze, Via Romana 17/19, 50125 Firenze, Italy

Lanza & Vanni (1981) assigned the American *Hydromantes* to the new genus *Hydromantoides*, a view supported by some European herpetologists. Consequently, I (Lanza, 1986) raised to generic level the subgenus *Speleomantes* Dubois, 1984. For some years *Speleomantes* has been used by a number of European authors as the valid name for the Old World plethodontid salamanders (three mainland and four Sardinian species); *Speleomantes* has been used also in at least two books (Stumpel-Rienks, 1992 and Nöllert & Nöllert, 1992). However, Profs Luciano Bullini and Giuseppe Nascetti (*Dipartimento di Genetica e Biologia Evolutiva, Università di Roma 'La Sapienza', Via Lancisi 29, 00161 Roma, Italy*) join with me in supporting Smith & Wake's application (see also Lanza, Nascetti & Bullini, 1986, p. 263).

Additional references

Lanza, B. 1986. I Rettili e gli Anfibi. Pp. 60–65, 289–321, 549–550 *in* Camarda, J., Falchi, S. & Nudda, G. (Eds.), *L'ambiente naturale in Sardegna* (*Elementi di base per la conoscenza e la gestione del territorio*). 557 pp. Carlo Delfino Editore, Sassari.

Lanza, B., Nascetti, G. & Bullini, L. 1986. A new species of *Hydromantes* from eastern Sardinia and its genetic relationships with the other Sardinian plethodontids (Amphibia: Urodela). *Bollettino del Museo Regionale di Scienze Naturali*, Torino, **4**(1): 261–289.

Nöllert, A. & Nöllert, C. 1992. *Die Amphibien Europas. Bestimmung-Gefährdung-Schutz*. 382 pp. Franckh-Kosmos, Stuttgart.

Stumpel-Rienks, S.E. 1992. *Nomina herpetofaunae Europeae. The vernacular names of the herpetofauna of Europe*. Supplemented with Asiatic Turkey, Cyprus, Transcaucasia, the Canary and Selvages Islands and Madeira. 271 pp. Aula, Wiesbaden.

(5) Robert G. Webb

Department of Biological Sciences, University of Texas at El Paso, El Paso, Texas 79968–0519, U.S.A.

I commend Dubois (1984) for his nomenclatural sleuthing that would require burial of *Hydromantes*. The case for the conservation of *Hydromantes* is supported by its otherwise consistent usage and long recognition during the past 70 years. In accordance with current usage and maintenance of nomenclatural stability, and to avoid name changes and unnecessary ultimate confusion, I strongly recommend approval of the application.

(6) Mario García Paris

Museo Nacional de Ciencias Naturales, José Gutiérrez Abascal 2, 28006 Madrid, Spain

En relación con el Caso 2868, considero que los argumentos presentados por los autores justifican sobradamente la petición de conservación del nombre *Hydromantes* y la fijación de *Salamandra genei* como especie tipo de dicho genéro.

En el caso presente considero que el uso sostenido del nombre *Hydromantes* durante los últimos 70 años justifica su conservación y por lo tanto expreso mi apoyo a la propuesta de Smith & Wake.

Dicha propuesta no cuestiona la validez del nombre *Hydromantoides* Lanza & Vanni, 1981, que mientras no sea rechazado biológicamente debe ser utilizado para designar a les especies americanas previamente incluidas en el genéro *Hydromantes*. En conclusión el uso de *Hydromantes* se limitaría a las especies europeas incluidas por Dubois (1984) en *Speleomantes*.

(7) W.R. Branch

Port Elizabeth Museum, P.O. Box 13147, 6013 Humewood, South Africa

I urge acceptance of the application by Smith & Wake for the sake of nomenclatural stability. Dubois's (1984) action threatens established nomenclature and, in relation to endangered species of *Hydromantes*, his usage of names causes unnecessary confusion in existing conservation legislation. The desirability of maintaining existing usage far outweighs any necessity to apply the principle of priority and I therefore support the application.

(8) David A. Good

Louisiana State University, Museum of Natural Science, 119 Foster Hall, Baton Rouge, Louisiana 70803–3216, U.S.A.

I am writing in support of the application by Smith & Wake for the conservation of the salamander name *Hydromantes*. This name was the only one in use for many decades and the literature in which it is used is voluminous. Blind insistence on following priority in the face of such an extensive literature serves no purpose other than to confuse systematists and utterly mystify the public.

(9) Robert F. Inger

Field Museum of Natural History, Roosevelt Road and Lake Shore Drive, Chicago, Illinois 60605, U.S.A.

I write in support of the proposal to conserve a long and frequently used name of a salamander genus. Smith & Wake put forward cogent and convincing arguments for conservation by the Commission. Two of the most important, indeed critical, functions of our system of nomenclature are at issue here: (1) facilitation of communication among scientists and between scientists and an interested general public, including these days officials in government agencies; (2) facilitation of retrieval of relevant literature. In the case of *Hydromantes* both these critical functions can be protected only if the proposals made by Smith & Wake are adopted. I urge that the Commission approve them.

(10) David M. Hillis

Department of Zoology, The University of Texas, Austin, Texas 78712, U.S.A.

Designation of *Salamandra genei* Temminck & Schlegel, 1838 as the type species of *Hydromantes* Gistel, 1848 will maintain the long-standing usage of the generic name. Furthermore, none of the actions proposed by Smith & Wake will impinge upon the debate over the content of *Hydromantes* (whether or not the genus should include the North American species). Thus, I urge the Commission to accept the proposals presented by these authors.

(11) Francis R. Cook

Canadian Museum of Nature, P.O. Box 3443, Station 'D', Ottawa, Canada K1P 6P4

Dubois (1984) replaced the name *Hydromantes* Gistel, 1848 because it was a junior synonym of *Geotriton* Bonaparte, [1832] and could not be used for a genus including the species *genei* and *italicus*. Dubois apparently made a technically correct argument but *Hydromantes* has been widely used since Dunn (1923). Because of the wide conservation and zoogeographical usage of this name it seems highly desirable to conserve it through the proposal to use the Commission's plenary powers. Smith & Wake noted that few authorities have followed Dubois (1984) in using the generic name *Speleomantes* Dubois, 1984, proposed for the European species in the complex. Since their application one such reference has appeared (Salvidio, 1993), which places some urgency on the Commission to approve the proposals before further destabilization ensues. It therefore seems clear-cut that the Commission should use its plenary powers as requested.

Additional reference

Salvidio, S. 1993. Life history of the European plethodontid salamander *Speleomantes ambrosii* (Amphibia, Caudata). *Herpetological Journal*, **3**(2): 55–59.

(12) Robert C. Stebbins

University of California, Museum of Vertebrate Zoology, Berkeley, California 94720, U.S.A.

I strongly support the proposed designation of *Salamandra genei* Temminck & Schlegel, 1838 as the type species of *Hydromantes* Gistel, 1848. *Hydromantes* is a replacement name which, with one exception (Dubois, 1984), has consistently been used during the past 70 years. I may add that in my opinion to place the Californian species of this salamander group in a separate genus *Hydromantoides* will lead to confusion and will obscure the evolutionary relationships between the European and Californian forms.

(13) Support for the application has also been received from Drs Merel J. Cox (*695/17 Pracharaj Road, Soi Pracharaj 19, Bangsue, Bangkok 10800, Thailand*), Robert A. Thomas (*Society for Environmental Education, P.O. Box 870610, New Orleans, Louisiana 70187–0610, U.S.A.*), Joseph T. Collins (*The University of Kansas, Museum of Natural History, Dyche Hall, Lawrence, Kansas 66045–2454, U.S.A.*), James Lazell (*The Conservation Agency, 6 Swinburne Street, Conanicut Island, Rhode Island 02835, U.S.A.*), Robert C. Drewes (*California Academy of Sciences, Golden Gate Park, San Francisco, California 94118–4599, U.S.A*), Robert G. Zweifel (*American Museum of Natural History, 79th Street and Central Park West, New York, N.Y. 11024, U.S.A.*) and Paul Chippindale (*Department of Zoology, The University of Texas at Austin, Austin, Texas 78712–1064, U.S.A.*).

Comments on the proposed conservation of HEMIDACTYLIINI Hallowell, 1856 (Amphibia, Caudata)
(Case 2869, BZN **50**: 129–132)

(1) Robert G. Webb

Department of Biological Sciences, University of Texas at El Paso, El Paso, Texas 79968–0519, U.S.A.

Bonaparte's ([1839] and 1850) names *Mycetoglossus* and MYCETOGLOSSINI probably are unknown to even salamander specialists. Acceptance of the forgotten MYCETOGLOSSINI as a valid name for the now-established HEMIDACTYLIINI (and other *Hemidactylium*-based family-group names) would create undue confusion. *Mycetoglossus* has remained unused since its inception and is a junior objective synonym of the valid and long-recognised *Pseudotriton*; suppression of the name (thereby invalidating MYCETOGLOSSINI) is justifiable. Thus, I support this proposal and recommend its approval.

(2) Harold A. Dundee

Department of Ecology, Evolution and Organismal Biology, Tulane University, New Orleans, Louisiana 70118–5698, U.S.A.

I have read the joint proposal by Prof Hobart Smith & Dr David Wake for conserving the name HEMIDACTYLIINI for a tribe of salamanders. They argue in favor of stability of a name in wide usage over priority.

We should recognise that in the early days of use of our present binominal system of nomenclature, when no code to stabilize nomenclatural practice existed, scientists were few, communication was poor, and publication, hence usage of names, was very limited. That alternative names exist is thus no surprise. Credit should be given to authors whose established names have priority but such overlooked, badly underused names simply have not become accepted. The huge surge of publication that began in the late 19th century produced a vast literature using names such as that recommended by Smith & Wake, and systematists now have HEMIDACTYLIINI well in memory and use. To regress to the earlier but unused name MYCETOGLOSSINI will only retard retrieval of literature needed for examination and citation for current and future studies. Consistency thus enhances the advance of systematic studies.

Only when a balance between alternative names exists would I support priority. Older studies are most often meager in detail and even flawed when compared with the sophistication of modern systematics. Quality studies using later names are where the scientist will find the information for consideration in his endeavors. I therefore firmly support the proposal of Smith & Wake.

(3) Mario Garcia Paris

Museo Nacional de Ciencias Naturales, Jose Gutierrez Abascal 2, 28006 Madrid, Spain

Respecto a los puntos solicitados en el caso deseo expresar mi apoto a la propuesta de Smith & Wake en consideración a los principios de estabilidad nomenclatura.

Por otra parte las relaciones filogenéticas entre los miembros de la tribu HEMIDACTYLIINI no están resueltas y quizá fuese conveniente posponer la solicitud de Smith & Wake hasta que la taxonomía del grupo se considere estabilizada para evitar cambios innecesarios.

(4) Merel J. Cox

695/17 Pracharaj Road, Soi Pracharaj 19, Bangsue, Bangkok 10800, Thailand

In this case there is a choice between priority and stability in the literature. Certainly priority should prevail if the result were a minimum of confusion and nomenclatural instability. However, Smith & Wake have shown that the prior name has only once been used and that unnecessary confusion would result if priority were followed.

I hope the Commission will seize this opportunity to defuse a potentially confusing situation by approving the proposals put forth. If they do so, they will have served their colleagues well.

(5) Robert A. Thomas

Society for Environmental Education, P.O. Box 870610, New Orleans, Louisiana 70187–0610, U.S.A.

I am writing in support of the application by Smith & Wake to conserve a longstanding name in the field of herpetology in the interest of stability, rather than using an older name that has remained virtually unused since publication. The name

HEMIDACTYLIINI has been widely published and used in both the scientific and popular literature. Resurrecting the older name MYCETOGLOSSINI that has been ignored for decades, simply for considerations of priority, will create unneeded confusion and complexity in the literature and I strongly recommend approval of the proposals.

(6) David M. Hillis
Department of Zoology, The University of Texas, Austin, Texas 78712, U.S.A.

Acceptance of the proposal by Smith & Wake to conserve the name HEMIDACTYLIINI Hallowell, 1856 is necessary to promote stability in the nomenclature of these widely studied salamanders. HEMIDACTYLIINI is commonly used as both a formal and informal name, whereas MYCETOGLOSSINI Bonaparte, 1980 was unused until resurrected by Dubois (1984), has remained unused since, and is based on a junior objective synonym that has also remained unused. Dubois's action is clearly contrary to the Code's admonition (Article 23b) that 'The Principle of Priority is to be used to promote stability and is not intended to be used to upset a long-accepted name in its accustomed meaning through the introduction of an unused name that is its senior synonym'.

(7) Francis R. Cook
Canadian Museum of Nature, P.O. Box 3443, Station 'D', Ontario, Canada K1P 6P4

The family-group name HEMIDACTYLIINI proposed by Hallowell in 1856, not re-used since Hallowell (1858) until Wake (1966) but frequently used since then, is a junior synonym of 'Mycetoglossina' Bonaparte, 1850. This was based on the generic name *Mycetoglossus* Bonaparte, [1839], which has remained unused as it is an unnecessary and invalid replacement for the name *Pseudotriton* Tschudi, 1838. Clearly nomenclature is best served by conserving the use of Wake (1966) and subsequent related publications, rather than allowing the resurrection of an obscure and unused family-group name, a term utterly meaningless and confusing to those who have followed Wake's partitioning of the family.

(8) Hidetoshi Ota
Department of Biology, University of Ryukyus, Nishihara, Okinawa, 903–01, Japan

I am fully in support of the proposal by Smith & Wake to conserve the tribal name HEMIDACTYLIINI Hallowell, 1856 by the suppression of the generic name *Mycetoglossus* Bonaparte, 1839 and invalidation of the tribal name MYCETOGLOSSINI Bonaparte, 1850. For promotion of stability of nomenclature which, I believe, is one of the most important functions of the Commission, the conservation of a long-accepted name is strongly desirable, unless there are reasons to invalidate it. In the present case, there are no merits at all in abiding by the principle of priority and resurrecting the unused tribal name which derives from the long unused and invalid generic name.

(9) Paul Chippindale
Department of Zoology, The University of Texas at Austin, Austin, Texas 78712–1064, U.S.A.

I am a PhD candidate at the University of Texas at Austin and my dissertation research involves an investigation of evolution and phylogeny of the plethodontid

salamander tribe HEMIDACTYLIINI. Since I have been studying plethodontids for several years I have a strong interest in the nomenclature of the group and I am familiar with the relevant literature.

In their application to maintain the existing, widely used name for the group, Smith & Wake have argued for stability, and I agree with them wholeheartedly. The taxon is the subject of an extensive literature, and the proposed alternative name for the group (MYCETOGLOSSINI) is obscure. I see absolutely no advantage in using the name MYCETOGLOSSINI; the effect of such a change would simply be widespread confusion. Herpetologists, evolutionary biologists, ecologists, conservation biologists and others who are familiar with the group know it by the name HEMIDACTYLIINI and this name only.

The monophyly of the HEMIDACTYLIINI is problematic because the relationships of the genus *Hemidactylium* are uncertain (work in progress by myself and others should help to clarify this issue in the relatively near future). In any case, use of the name MYCETOGLOSSINI would not help matters and would only serve to muddy the waters further. I will certainly resist use of this name, which has appeared in the literature only once (Dubois, 1984) in contrast to the usage of the name HEMIDACTYLIINI.

(10) Support for the application has also been received from Prof Robert C. Stebbins (*University of California, Museum of Vertebrate Zoology, Berkeley, California 94720, U.S.A.*) and Drs Joseph T. Collins (*The University of Kansas, Museum of Natural History, Dyche Hall, Lawrence, Kansas 66045 2454, U.S.A.*), James Lazell (*The Conservation Agency, 6 Swinburne Street, Conanicut Island, Rhode Island 02835, U.S.A.*), Robert C. Drewes (*California Academy of Sciences, Golden Gate Park, San Francisco, California 94118–4599, U.S.A.*), Richard G. Zweifel (*American Museum of Natural History, 79th Street and Central Park West, New York, N.Y. 11024, U.S.A.*), W.R. Branch (*Port Elizabeth Museum, P.O. Box 13147, 6013 Humewood, South Africa*), David A. Good (*Louisiana State University, Museum of Natural Science, 119 Foster Hall, Baton Rouge, Louisiana 70803–3216, U.S.A.*) and Robert F. Inger (*Field Museum of Natural History, Roosevelt Road and Lake Shore Drive, Chicago, Illinois 60605, U.S.A.*).

Comment on the proposed designation of a neotype for *Coelophysis bauri* (Cope, 1887) (Reptilia, Saurischia)

(Case 2840; see BZN **49**: 276–279; **50**: 147–151, 236–239, 291–294; **51**: 48–51)

Philip Huber
Department of Geological Sciences, Ohio University, Athens, Ohio 45701, U.S.A.

Colbert et al. (BZN **49**: 276–279) asked the Commission to use its plenary powers to set aside previous type designations for the nominal species *Coelurus bauri* Cope, 1887, and to designate as neotype the complete skeleton AMNH 7224 from the Whitaker Quarry (Ghost Ranch) which is the holotype of *Rioarribasaurus colberti* Hunt & Lucas, 1991. The names *Rioarribasaurus* and *colberti* would thus be rejected as junior objective synonyms of *Coelophysis* Cope, 1889 and *bauri*, respectively.

However, the following points argue strongly against acceptance by the Commission of the application by Colbert et al.

(1) The proposal is made in spite of the existence of original material from Cope's collection in the American Museum of Natural History; it does not meet the qualifying conditions of Article 75d of the Code, nor the terms of Recommendation 75A.

(2) Colbert et al. state (para. 8) that 'Hunt & Lucas (1991) did not dispute the synonymy of *C. bauri* (as always understood) and *R. colberti* so their name should not be used as valid'. However, in accordance with the Code and in the absence of revisory work the name *C. bauri* refers only to Cope's original material. Furthermore Hunt & Lucas did dispute the synonymy by demonstrating the lectotype of *C. bauri* to be generically indeterminate and by treating *C. bauri* as a nomen dubium. They properly coined the name *Rioarribasaurus colberti* for the Whitaker Quarry coelurosaur, and designated a holotype in accordance with the Code.

(3) The provenance of Cope's material is uncertain. Lucas & Hunt (1989, 1992) showed that at least some of the specimens from near Gallina (New Mexico) must have been derived from the Petrified Forest Formation and not from the Rock Point Formation which contains the Whitaker Quarry. Colbert (1947, 1964, 1989) and Colbert et al. (1992) incorrectly claim that the Whitaker Quarry is located in the Petrified Forest Formation. On the Colorado Plateau, the Petrified Forest and Rock Point Formations are easily distinguished by the presence of bentonitic siltstone in the former. The Rock Point Formation siltstone lacks a bentonitic fraction, as does the siltstone at the Whitaker Quarry. The Whitaker Quarry can be confidently assigned to the Rock Point Formation, on stratigraphic and sedimentologic grounds. Litwin (1986) and Litwin, Traverse & Ash (1991) sampled both Formations in the vicinity of the Whitaker Quarry for palynomorphs in order to determine the age of the type locality of *R. colberti*. They placed the quarry in the Rock Point Formation, and showed that this is palynologically younger than the Petrified Forest Formation. The locality of some if not all of Cope's material and the type locality of *R. colberti* are in stratigraphic units of different ages (early-middle Norian and late Norian-Rhaetian respectively). Padian (1986) also concluded, on taphonomic evidence, that Cope's specimens were collected from a horizon and locality different from the Whitaker Quarry.

(4) The application by Colbert et al. should be rejected because Cope's *C. bauri* material, though indeterminate, may belong to a genus different from that represented by the *R. colberti* holotype and all other published specimens of *Rioarribasaurus* from the Whitaker Quarry. The pubis of one of Cope's specimens (AMNH 2724) has an obturator foramen (von Huene, 1915, fig. 61), and Padian (1986, p. 50, fig. 5.2) illustrated this character on a partial skeleton from the Petrified Forest National Park in Arizona which he referred to *C. bauri*. This character state is widely accepted as meriting generic distinction in dinosaurs, and it would appear that Cope's and Padian's specimens are more closely related to each other than either is to the holotype and the other published specimens of *R. colberti*. However, Sullivan (1993) noted a single obturator foramen on several Whitaker Quarry specimens, while Paul (1993) stated that two obturator foramina are sometimes present. This and other observations led Paul (p. 400) to treat *Rioarribasaurus* as a junior subjective synonym of *Syntarsus* Raath, 1969, and he referred all Whitaker Quarry specimens

to *Syntarsus colberti* (nov. comb.). Paul's conclusions await critical evaluation, but they do show that there is no taxonomic need to conserve the binomen *Coelophysis bauri*. Cope's material is indeterminate and *C. bauri* is properly to be considered a nomen dubium. The specimen reported by Padian (1986) is more complete than Cope's total material but is also indeterminate.

(5) Colbert et al. (BZN **50**: 278, para. 9) state that the name *C. bauri* 'is solidly entrenched in the literature'. I maintain that it is not, and that perceptions to the contrary are largely based on the incorrect application and usage of this name for nearly 50 years by Colbert (1947, 1964, 1989), Colbert & Baird (1958), Padian (1986) and Rowe & Gauthier (1990), and also by Schwartz & Gillette (in press). Colbert et al. seek the effective suppression of the name *Rioarribasaurus* which is already being used for the Whitaker Quarry theropod, for example by Olshevsky (1991, 1992), Olsen et al. (1992) and Cuny & Galton (1993); as already mentioned Paul (1993) also considered *Coelophysis bauri* to be a nomen dubium.

(6) A number of comments have been published in the *Bulletin* which support the application by Colbert et al. Unfortunately these comments do not contribute information of value about the taxonomic status of *Coelophysis bauri* and/or serve only to perpetuate the errors mentioned in the previous paragraph. In any event the taxonomic dispute in this case should not be subject to a 'yea' or 'nay' popularity contest.

Additional references

Colbert, E.H. 1964. The Triassic dinosaur genera *Podokesaurus* and *Coelophysis*. *American Museum Novitates*, **2168**: 1–12.

Colbert, E.H. & Baird, D. 1958. Coelurosaur bone casts from the Connecticut Valley Triassic. *American Museum Novitates*, **1901**: 1–11.

Cuny, G. & Galton, P.M. 1993. Revision of the Airel theropod from the Triassic-Jurassic boundary (Normandy, France). *Neues Jahrbuch für Geologie und Paläontologie*, **187**: 261–268.

Litwin, R.J. 1986. *The palynostratigraphy and age of the Chinle and Moenave Formations, southwestern USA*. Unpublished Ph.D. Dissertation, Pennsylvania State University. 265 pp.

Litwin, R.J., Traverse, A. & Ash, S.R. 1991. Preliminary palynological zonation of the Chinle Formation, southwestern USA, and its correlation to the Newark supergroup (eastern USA). *Review of Paleobotany and Palynology*, **68**: 269–287.

Olsen, P.E., McDonald, N.G., Huber, P. & Cornet, B. 1992. *Stratigraphy and paleoecology of the Deerfield rift basin (Triassic-Jurassic, Newark Supergroup), Massachusetts*. New England Intercollegiate Geological Conference, 84th Annual Meeting, Amherst, MA. Guidebook for fieldtrips, vol. 2, pp. 488–535.

Olshevsky, G. 1991. A revision of the Parainfraclass Archosauria Cope, 1869, excluding the advanced Crocodylia. *Mesozoic Meanderings*, vol. 2. 196 pp. (Second printing, 1992, 268 pp.).

OPINION 1765

Fusus Helbling, 1779 (Mollusca, Gastropoda): suppressed, and *Fusinus* Rafinesque, 1815 and *Colubraria* Schumacher, 1817: conserved

Ruling

(1) Under the plenary powers the name *Fusus* Helbling, 1779 is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:

(a) *Fusinus* Rafinesque, 1815 (gender: masculine), type species, by subsequent monotypy by Lamarck (1799) of the replaced nominal genus *Fusus* Bruguière, 1789, *Murex colus* Linnaeus, 1758;

(b) *Colubraria* Schumacher, 1817 (gender: feminine), type species by monotypy *Colubraria granulata* Schumacher, 1817.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *colus* Linnaeus, 1758, as published in the binomen *Murex colus* (specific name of the type species of *Fusinus* Rafinesque, 1815);

(b) *granulata* Schumacher, 1817, as published in the binomen *Colubraria granulata* (specific name of the type species of Schumacher, 1817).

(4) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:

(a) *Fusus* Helbling, 1779, as suppressed in (1) above;

(b) *Fusus* Bruguière, 1789 (a junior homonym of *Fusus* Helbling, 1779);

(c) *Fusus* [Röding], 1798 (a junior homonym of *Fusus* Helbling, 1779 and of *Fusus* Bruguière, 1789).

History of Case 2729

An application for *Fusus* Helbling, 1779 to be confirmed as unavailable was received from Mr Richard E. Petit (*North Myrtle Beach, South Carolina, U.S.A.*) and Dr Druid Wilson (*Lake Wales, Florida, U.S.A.*) on 19 June 1989. After correspondence the case was published in BZN **48**: 92–96 (June 1991). Notice of the case was sent to appropriate journals.

Opposing comments from Prof Emily H. Vokes (*Tulane University, New Orleans, Louisiana, U.S.A.*) and from Drs A.G. Beu (*DSIR Geology and Geophysics, Lower Hutt, New Zealand*), B.A. Marshall (*National Museum of New Zealand, Wellington, New Zealand*) & W.F. Ponder (*Australian Museum, Sydney South, New South Wales, Australia*) were published in BZN **48**: 245–246 (September 1991) and BZN **49**: 68–70 (March 1992) respectively. A reply by the authors of the application was published in BZN **49**: 221–222 (September 1992). Further opposing comments from Dr Riccardo Giannuzzi-Savelli (*Palermo Pallavicino, Italy*) and from Dr Marco Oliverio (*Università di Roma 'La Sapienza', Rome, Italy*) were published in BZN **49**: 289 (December 1992) and BZN **50**: 140–139 (June 1993) respectively.

Comments were also received from Prof L.B. Holthuis (*Nationaal Natuurhistorisch Museum, Leiden, The Netherlands*, published in BZN **48**: 244–245, September 1991)

and from Dr Barry Roth (*Museum of Paleontology, University of California, San Francisco, U.S.A.*, published in BZN **49**: 68, March 1992).

All the malacologists who made observations on this case, including the applicants Mr Petit and Dr Wilson, agreed that the name *Fusus* as published by Helbling (1779) should not be used as a valid name. As pointed out in the application, it was not clear that Helbling intended to introduce it as a genus-group name and it had had only very limited use (para. 8 of the application).

Petit & Wilson proposed (BZN **48**: 94, para. 18) that the Commission should rule it to be unavailable but, to remove any doubt, Beu, Marshall & Ponder (BZN **49**: 69) proposed that it be suppressed. Adoption of either of these courses would dispose of *Fusus* sensu Helbling as a valid name. The conseqences differed, however, as far as some junior names were concerned.

If *Fusus* Helbling were taken as unavailable then *Fusus* Bruguière, 1789 would not be disqualified as a junior homonym and it, rather than its junior objective synonym *Fusinus* Rafinesque, 1815, would be valid. Petit & Wilson favoured this outcome. On the other hand, Vokes (BZN **48**: 425), Beu, Marshall & Ponder (BZN **49**: 68), Giannuzzi-Savelli (BZN **49**: 289) and Oliverio (BZN **50**: 140) considered that *Fusinus* should be conserved on the grounds of its dominant usage in the past 60 years and its unambiguity (whereas *Fusus* has been used in more than one sense). All were agreed that the conservation of *Colubraria* Schumacher, 1817 (a junior subjective synonym of *Fusus* sensu Helbling) was desirable.

Vokes and Beu et al. stated that *Fusinus* is in universal modern use, but Petit & Wilson (BZN **48**: 94, para. 15 and **49**: 221) cited some relatively recent mentions of *Fusus* Bruguière. However, there was no doubt that during this century *Fusinus* has been used much more (as stated in para. 14 of the application).

Three votes were presented to allow distinction between the outcomes advocated by Petit & Wilson and by Beu, Marshall & Ponder. The votes encompassed all the proposals published in BZN **48**: 94–95 and **49**: 69–70.

Decision of the Commission

On 1 December 1993 the members of the Commission were invited to vote on the case. At the close of the voting period on 1 March 1994 the votes were as recorded below:

Vote 1. The Commission was first asked to use its plenary powers to reject the name *Fusus* Helbling, 1779.

22 Commissioners were in favour and three (Hahn, Kabata and Macpherson) were against.

No votes were received from Halvorsen and Lehtinen.

Dupuis and Ride were on leave of absence.

Hahn commented that, since *Fusus* Helbling had been used in some important works and its synomymy with *Colubraria* was rather uncertain, he would have preferred to give *Colubraria* precedence over *Fusus* Helbling, which would remain available. As a junior homonym *Fusus* Bruguière would not upset the usage of *Fusinus* Rafinesque.

Vote 2. The Commission was next asked, if vote 1 above were approved, either (a) to rule that *Fusus* Helbling, 1779 is unavailable because it was not treated as a valid

name when published (Petit & Wilson proposal (1) on BZN **48**: 94), or (b) to suppress that name for the purposes of the Principle of Priority but not for those of the Principle of Homonymy (Beu et al. proposal (1) on BZN **49**: 69).

Approval of either vote 2(a) or vote 2(b) would allow the name *Colubraria* Schumacher, 1817 and that of its type species to be placed on Official Lists, in accord with proposals (2)(b) and (3)(b) on BZN **49**: 69–70.

Vote 2(a) had 7 in favour: Bouchet, Cocks, Heppell, Nielsen, Starobogatov, Trjapitzin, Uéno

Vote 2(b) had 15 in favour: Bayer, Bock, Cogger, Corliss, Holthuis, Kraus, Mahnert, Martins de Souza, Minelli, Nye, Savage, Schuster, Štys, Thompson, Willink.

Vote 3. The Commission was finally asked (if *Fusus* Helbling had been rejected) either (a) to place the name of *Fusus* Bruguière, 1789 and that of its type species on Official Lists, together with the rejection of *Fusinus* Rafinesque, 1815 (Petit & Wilson proposals (2), (3) and (4) on BZN **48**: 95), or (b) to suppress *Fusus* Bruguière, 1789 or reject it as a junior homonym of *Fusus* Helbling, 1779.

If *Fusus* Bruguière were suppressed or rejected the name *Fusinus* Rafinesque, 1815 and that of its type species would be placed on Official Lists (Beu et al. proposals (2)(a) and (3)(a) on BZN **49**: 69–70)).

Two Commissioners (Heppell and Trjapitzin) were in favour of vote 3(a), but 20 were in favour of vote 3(b), the rejection of *Fusus* Bruguière, 1789.

Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

Colubraria Schumacher, 1817, *Essai d'un nouveau système des habitations des vers testacés* ..., p. 76.

colus, *Murex*, Linnaeus, 1758, *Systema naturae*, Ed. 10, vol. 1, p. 753.

Fusinus Rafinesque, 1815, *Analyse de la nature ou tableau de l'univers* ..., p. 145.

Fusus Bruguière, 1789, *Encyclopédie méthodique. Histoire naturelle des vers*, vol. 1, part 1, p. xv.

Fusus Helbling, 1779, *Abhandlungen einer Privatgesellschaft in Böhmen*, **4**: 116.

Fusus [Röding], 1798, *Museum Boltenianum ... Pars secunda continens Conchylia sive Testacea univalvia, bivalvia & multivalvia*, p. 118.

granulata, *Colubraria*, Schumacher, 1817, *Essai d'un nouveau système des habitations des vers testacés*, p. 251.

The following is the reference for the fixation of *Murex colus* Linnaeus, 1758 as the type species of the nominal genus *Fusinus* Rafinesque, 1815:

Lamarck, J.B.P.A. 1799. *Mémoires de la Société d'Histoire Naturelle de Paris*, **1**: 73.

OPINION 1766

Tortaxis Pilsbry, 1906 and *Allopeas* Baker, 1935 (Mollusca, Gastropoda): conserved by the designation of a neotype for *Achatina erecta* Benson, 1842

Ruling

(1) Under the plenary powers all previous fixations of type specimens for the nominal species *Achatina erecta* Benson, 1842 are hereby set aside and specimen no. 1991104A in the Natural History Museum, London, is designated as the neotype.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:

(a) *Tortaxis* Pilsbry, 1906 (gender: masculine), type species by original designation *Achatina erecta* Benson, 1842;

(b) *Allopeas* Baker, 1935 (gender: neuter), type species by original designation *Bulimus gracilis* Hutton, 1834.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *erecta* Benson, 1842, as published in the binomen *Achatina erecta* and as defined by the neotype designated in (1) above (specific name of the type species of *Tortaxis* Pilsbry, 1906);

(b) *gracilis* Hutton, 1834, as published in the binomen *Bulimus gracilis* (specific name of the type species of *Allopeas* Baker, 1935);

(c) *achatinaceus* Pfeiffer, 1846, as published in the binomen *Bulimus achatinaceus* and as defined by the lectotype (no. ZMB Moll 65746 in the Pfeiffer collection in the Humboldt Zoologisches Museum, Berlin) designated by Naggs (1994).

History of Case 2833

An application for the conservation of *Tortaxis* Pilsbry, 1906 and *Allopeas* Baker, 1935 by the designation of a neotype for *Achatina erecta* Benson, 1842 (the type species of *Tortaxis*) was received from Mr Fred Naggs (*The Natural History Museum, London, U.K.*) on 11 October 1991. After correspondence the case was published in BZN **49**: 258 260 (December 1992). Notice of the case was sent to appropriate journals.

A comment from Mr Naggs, published in BZN **50**: 228 (September 1993), noted that four shells in the Natural History Museum, London, U.K., labelled and catalogued as syntypes of *Achatina erecta* Benson, 1842, were specimens of *Bulimus achatinaceus* Pfeiffer, 1846 (p. 82), and that this name would also be conserved by the proposed Commission action.

B. achatinaceus was described from Java; it is a common and widespread species around the Indo-Pacific region. Naggs (1994, p. 80, fig. 1) designated a lectotype for the taxon. A proposal to place the specific name of *B. achatinaceus* Pfeiffer, 1846 on the Official List, in addition to the names in para. 9 on BZN **49**: 259, was included on the voting paper.

Naggs, F. 1994. The reproductive anatomy of *Paropeas achatinaceum* and a new concept of *Paropeas* (Pulmonata: Achatinoidea: Subulinidae). *Journal of Molluscan Studies*, **60**: 79–95.

Decision of the Commission

On 1 December 1993 the members of the Commission were invited to vote on the proposals published in BZN **49**: 259, together with the addition noted above. At the close of the voting period on 1 March 1994 the votes were as follows:

Affirmative votes — 25: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Hahn, Heppell, Holthuis, Kabata, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Uéno, Willink

Negative votes — none.

No votes were received from Halvorsen and Lehtinen.

Dupuis and Ride were on leave of absence.

Heppell noted that the type series of *Achatina erecta* Benson, 1842 included specimens of both *Bulimus gracilis* Hutton, 1834 and *B. achatinaceus* Pfeiffer, 1846; he commented that the designation of a neotype for *A. erecta* sensu Reeve (1849) in accordance with usage was only justified if it were clear that no syntypes existed which belonged to this taxonomic species. (Mr Naggs replied that no such material could be found in the institution housing most of Benson's collection (the Zoological Museum, Cambridge), or in other institutions where further Benson material was kept (the Smithsonian Institution, Washington; the Zoological Survey of India, Calcutta; and the Natural History Museum, London)).

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

achatinaceus, *Bulimus*, Pfeiffer, 1846, *Symbolae ad Historiam Heliceorum*, part 3, p. 82.

Allopeas Baker, 1935, *The Nautilus*, **48**(3): 84.

erecta, *Achatina*, Benson, 1842, *Annals and Magazine of Natural History*, (1)**9**: 487.

gracilis, *Bulimus*, Hutton, 1834, *Journal of the Asiatic Society of Bengal*, **3**: 93.

Tortaxis Pilsbry, 1906, *in*: Tryon, G.W., Jr, *Manual of Conchology*, ser. 2, vol. 18 (Pulmonata), p. 5.

OPINION 1767

Pleurobranchus forskalii Rüppell & Leuckart, [1828] and *P. testudinarius* Cantraine, 1835 (Mollusca, Gastropoda): specific names conserved

Ruling

(1) Under the plenary powers the specific name *forskahli* Delle Chiaje, 1822, as published in the binomen *Pleurobranchus forskahli*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *forskalii* Rüppell & Leuckart, [1828], as published in the binomen *Pleurobranchus forskålii*;

(b) *testudinarius* Cantraine, 1835, as published in the binomen *Pleurobranchus testudinarius*.

(3) The name *forskahli* Delle Chiaje, 1822, as published in the binomen *Pleurobranchus forskahli* and as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 2838

An application for the conservation of the specific names of *Pleurobranchus forskalii* Rüppell & Leuckart, [1828] and *P. testudinarius* Cantraine, 1835 was received from Dr W.B. Rudman (*The Australian Museum, Sydney South, New South Wales, Australia*) on 6 January 1992. After correspondence the case was published in BZN **50**: 16–19 (March 1993). Notice of the case was sent to appropriate journals.

It was noted on the voting paper that the application had the support of Mr Robert Burn (*Geelong, Victoria, Australia*), and that 17 of the references held by the Commission Secretariat which demonstrate the usage of the name *Pleurobranchus testudinarius* (para. 5 of the application) were published no earlier than 1960.

Decision of the Commission

On 1 December 1993 the members of the Commission were invited to vote on the proposals published in BZN **50**: 18. At the close of the voting period on 1 March 1994 the votes were as follows:

Affirmative votes — 24: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Hahn, Heppell, Holthuis, Kabata, Kraus, Macpherson, Mahnert, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Uéno, Willink

Negative votes — none.

No votes were received from Halvorsen, Lehtinen and Martins de Souza.

Dupuis and Ride were on leave of absence.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

forskahli, *Pleurobranchus*, Delle Chiaje, 1822, *Memorie sulla storia e notomia degli animali senza vertebre del Regno di Napoli, Figure*, pl. 41, fig. 11.

forskalii, *Pleurobranchus*, Rüppell & Leuckart, [1828], p. 18, pl. 5, figs. 2a, 2b in: *Atlas zu der Reise im nördlichen Afrika von Eduard Rüppell.*

testudinarius, *Pleurobranchus*, Cantraine, 1835, *Bulletins de l'Académie Royale des Sciences et Belles-Lettres de Bruxelles*, **2**: 385.

OPINION 1768

Taningia danae Joubin, 1931 (Mollusca, Cephalopoda): given precedence over *Octopodoteuthis persica* Naef, 1923

Ruling

(1) Under the plenary powers the specific name *danae* Joubin, 1931, as published in the binomen *Taningia danae*, is hereby given precedence over the specific name *persica* Naef, 1923, as published in the binomen *Octopodoteuthis persica*, whenever the two names are considered to be synonyms.

(2) The name *Taningia* Joubin, 1931 (gender: feminine), type species by monotypy *Taningia danae* Joubin, 1931, is hereby placed on the Official List of Generic Names in Zoology.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *danae* Joubin, 1931, as published in the binomen *Taningia danae* (specific name of the type species of *Taningia* Joubin, 1931), with the endorsement that it is to be given precedence over *persica* Naef, 1923, as published in the binomen *Octopodoteuthis persica*, whenever the two names are considered to be synonyms;

(b) *persica* Naef, 1923, as published in the binomen *Octopodoteuthis persica*, with the endorsement that it is not to be given priority over *danae* Joubin, 1931, as published in the binomen *Taningia danae*, whenever the two names are considered to be synonyms.

History of Case 2845

An application for the specific name of *Taningia danae* Joubin, 1931 to be given precedence over that of *Octopodoteuthis persica* Naef, 1923 was received from Drs Michael Vecchione (*National Marine Fisheries Service, National Museum of Natural History, Washington, D.C., U.S.A.*) and Clyde F.E. Roper (*National Museum of Natural History, Smithsonian Institution, Washington, D.C., U.S.A.*) on 9 March 1992. After correspondence the case was published in BZN **49**: 261 263 (December 1992). Notice of the case was sent to appropriate journals.

Support for the application from Dr Malcolm R. Clarke (*Newton Ferrers, Plymouth, Devon, U.K.*) was noted in BZN **50**: 141 (June 1993).

Decision of the Commission

On 1 December 1993 the members of the Commission were invited to vote on the proposals published in BZN **49**: 262. At the close of the voting period on 1 March 1994 the votes were as follows:

Affirmative votes — 21: Bayer, Bock, Cocks, Cogger, Corliss, Hahn, Heppell, Holthuis, Kabata, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Trjapitzin, Uéno, Willink

Negative votes — 4: Bouchet, Starobogatov, Štys and Thompson.

No votes were received from Halvorsen and Lehtinen.

Dupuis and Ride were on leave of absence.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

danae, *Taningia*, Joubin, 1931, *Annales de l'Institut Océanographique*, **10**: 181.

persica, *Octopodoteuthis*, Naef, 1923, *Fauna e Flora del Golfo di Napoli*, **35**(1,1): 337.

Taningia Joubin, 1931, *Annales de l'Institut Océanographique*, **10**: 181.

OPINION 1769

Styloptocuma Băcescu & Muradian, 1974 (Crustacea, Cumacea): conserved with *S. antipai* Băcescu & Muradian, 1974 designated as the type species

Ruling

(1) Under the plenary powers it is hereby ruled that the type species of the nominal genus *Styloptocuma* Băcescu & Muradian, 1974 is *Styloptocuma antipai* Băcescu & Muradian, 1974 by original designation.

(2) The name *Styloptocuma* Băcescu & Muradian, 1974 (gender: neuter), type species by original designation as ruled in (1) above *Styloptocuma antipai* Băcescu & Muradian, 1974, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *antipai* Băcescu & Muradian, 1974, as published in the binomen *Styloptocuma antipai* (specific name of the type species of *Styloptocuma* Băcescu & Muradian, 1974), is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2787

An application for the conservation of the generic name *Styloptocuma* Băcescu & Muradian, 1974 with the designation of *Styloptocuma antipai* Băcescu & Muradian, 1974 as the type species was received from Prof L.B. Holthuis (*Nationaal Natuurhistorisch Museum, Leiden, The Netherlands*) on 28 August 1990. After correspondence the case was published in BZN **49**: 264–265 (December 1992). Notice of the case was sent to appropriate journals.

A comment in support from Prof Les Watling (*Darling Marine Center, University of Maine, Walpole, Maine, U.S.A.*) was published in BZN **50**: 231 (September 1993)

It was noted on the voting paper that in his (1992) paper on Cumacea, Băcescu (p. 262) attributed the name *Styloptocuma* to Băcescu & Muradian (1974) and cited *S. antipai* as the type species; he recorded that there had been no type designation in the original publication and that an application to the Commission would be made to rectify this.

Decision of the Commission

On 1 December 1993 the members of the Commission were invited to vote on the proposals published in BZN **49**: 264–265. At the close of the voting period on 1 March 1994 the votes were as follows:

Affirmative votes — 24: Bayer, Bock, Cocks, Cogger, Corliss, Hahn, Heppell, Holthuis, Kabata, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Uéno, Willink

Negative votes — 1: Bouchet.

No votes were received from Halvorsen and Lehtinen.

Dupuis and Ride were on leave of absence.

Bouchet commented that he would have preferred to set aside the type species designation for *Styloptocuma* by Vevers et al. (1979) and any other designation prior to that by Băcescu (1992), and to date *Styloptocuma* from Băcescu (1992).

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:
antipai, *Styloptocuma*, Băcescu & Muradian, 1974, *Revue Roumaine de Biologie*, **19**: 71.
Styloptocuma Băcescu & Muradian, 1974, *Revue Roumaine de Biologie*, **19**: 74.

OPINION 1770

Pachyrhynchus Germar, 1824, *Somatodes* Schönherr, 1840 and the specific name of *Pachyrhynchus moniliferus* Germar, 1824 (Insecta, Coleoptera): conserved

Ruling

(1) Under the plenary powers the following names are hereby suppressed:

(a) the generic name *Somatodes* Schönherr, 1823, and all uses of *Somatodes* prior to the publication of *Somatodes* Schönherr, 1840, for the purposes of both the Principle of Priority and the Principle of Homonymy;

(b) the specific name *sanctus* Schönherr, 1823, as published in the binomen *Somatodes sanctus*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *Somatodes* Schönherr, 1840 (gender: masculine), type species by monotypy *Somatodes misumenus* Gyllenhal in Schönherr, 1840, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *misumenus* Gyllenhal in Schönherr, 1840, as published in the binomen *Somatodes misumenus* (specific name of the type species of *Somatodes* Schönherr, 1840), is hereby placed on the Official List of Specific Names in Zoology.

(4) The name SOMATODINAE Lacordaire, 1863 (type genus *Somatodes* Schönherr, 1840) is hereby placed on the Official List of Family-Group Names in Zoology.

(5) The name *Somatodes* Schönherr, 1823, as suppressed in (1)(a) above, is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology.

(6) The name *sanctus* Schönherr, 1823, as published in the binomen *Somatodes sanctus* and as suppressed in (1)(b) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

(7) The name SOMATODINI Schönherr, 1823 (type genus *Somatodes* Schönherr, 1823) is hereby placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology (unavailable because the name of its type genus has been suppressed).

History of Case 2825

An application for the conservation of *Pachyrhynchus* Germar, 1824, *Somatodes* Schönherr, 1840 and the specific name of *Pachyrhynchus moniliferus* Germar, 1824 was received from Mr R.T. Thompson (c/o *The Natural History Museum, London, U.K.*) on 25 June 1991. After correspondence the case was published in BZN **49**: 266–267 (December 1992). Notice of the case was sent to appropriate journals.

The name *Pachyrhynchus* and that of the type species of the genus, *P. moniliferus*, both of Germar (1824), were placed on Official Lists in Opinion 928 (August 1970). However, the senior synonyms *Somatodes* and *S. sanctus*, both of Schönherr (1823), were not then considered.

Decision of the Commission

On 1 December 1993 the members of the Commission were invited to vote on the proposals published in BZN **49**: 267. At the close of the voting period on 1 March 1994 the votes were as follows:

Affirmative votes — 25: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Hahn, Heppell, Holthuis, Kabata, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Uéno, Willink

Negative votes — none.

No votes were received from Halvorsen and Lehtinen.

Dupuis and Ride were on leave of absence.

Original references

The following are the original references to the names placed on Official Lists and Official Indexes by the ruling given in the present Opinion:

misumenus, *Somatodes*, Gyllenhal in Schönherr, 1840, *Genera et species curculionidum*, vol. 5, part 2, p. 801.

sanctus, *Somatodes*, Schönherr, 1823, *Isis* (von Oken), 7(10): col. 1139.

Somatodes Schönherr, 1823, *Isis* (von Oken), 7(10): col. 1139.

Somatodes Schönherr, 1840, *Genera et species curculionidum*, vol. 5, part 2, p. 800.

SOMATODINAE Lacordaire, 1863, *Histoire naturelle des insectes. Genera des coléoptères. 6. Curculionides*, p. 319.

SOMATODINI Schönherr, 1823, *Isis* (von Oken), 7(10): col. 1139.

OPINION 1771

Cryptophagus advena Waltl, 1834 (currently *Ahasverus advena*; Insecta, Coleoptera): specific name conserved

Ruling

(1) Under the plenary powers the specific name *brunneus* Fabricius, 1792, as published in the binomen *Lyctus brunneus*, is hereby suppressed for the purposes of both the Principle of Priority and the Principle of Homonymy.

(2) The name *Ahasverus* des Gozis, 1881 (gender: masculine), type species by monotypy *Cryptophagus advena* Waltl, 1834, is hereby placed on the Official List of Generic Names in Zoology.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *advena* Waltl, 1834, as published in the binomen *Cryptophagus advena* (specific name of the type species of *Ahasverus* des Gozis, 1881);

(b) *brunneus* Stephens, 1830, as published in the binomen *Xylotrogus brunneus* (specific name of the type species of *Xylotrogus* Stephens, 1830).

(4) The name *brunneus* Fabricius, 1792, as published in the binomen *Lyctus brunneus* and as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 2846

An application for the conservation of the specific name of *Cryptophagus advena* Waltl, 1834 was received from Mr Robert D. Pope (c/o *The Natural History Museum, London, U.K.*) on 17 March 1992. After correspondence the case was published in BZN **50**: 20–22 (March 1993). Notice of the case was sent to appropriate journals.

A comment in support from Dr R.G. Booth (*International Institute of Entomology, c/o The Natural History Museum, London, U.K.*) was published in BZN **50**: 234 (September 1993).

Decision of the Commission

On 1 December 1993 the members of the Commission were invited to vote on the proposals published in BZN **50**: 21. At the close of the voting period on 1 March 1994 the votes were as follows:

Affirmative votes — 25: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Hahn, Heppell, Holthuis, Kabata, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Uéno, Willink

Negative votes — none.

No votes were received from Halvorsen and Lehtinen.

Dupuis and Ride were on leave of absence.

Uéno commented that he voted in favour only because the insects concerned are economically important.

Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

Ahasverus des Gozis, 1881, *Bulletin des Séances de la Société Entomologique de France*, (6)**1**: cxxvii.

advena, *Cryptophagus*, Waltl, 1834, *Faunus*, **1**: 169.

brunneus, *Lyctus*, Fabricius, 1792, *Entomologia systematica*, vol. 1, part 2, p. 503.

brunneus, *Xylotrogus*, Stephens, 1830, *Illustrations of British entomology. Mandibulata*, vol. 3, p. 117.

OPINION 1772

METOPIINI Raffray, 1904 (Insecta, Coleoptera): spelling emended to METOPIASINI, and METOPIINI Townsend, 1908 (Insecta, Diptera): spelling emended to METOPIAINI, so removing the homonymy with METOPIINAE Foerster, [1869] (Insecta, Hymenoptera)

Ruling

(1) Under the plenary powers:

(a) it is hereby ruled that for the purposes of Article 29 of the Code the stem of the generic name *Metopia* Meigen, 1803 is METOPIA-;

(b) it is hereby ruled that for the purposes of Article 29 the stem of the generic name *Metopias* Gory, 1832 is METOPIAS-.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:

(a) *Metopia* Meigen, 1803 (gender: feminine), type species by monotypy *Musca leucocephala* Rossi, 1790 (a senior subjective synonym of *Tachina argyrocephala* Meigen, 1824 but a junior primary homonym of *Musca leucocephala* de Villers, 1789);

(b) *Metopias* Gory, 1832 (gender: masculine), type species by monotypy *Metopias curculionoides* Gory, 1832;

(c) *Metopius* Panzer, 1806 (gender: masculine), type species by subsequent designation by Viereck (1912) *Sphex vespoides* Scopoli, 1763.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *argyrocephala* Meigen, 1824, as published in the binomen *Tachina argyrocephala* (valid subjective synonym of the specific name of *Musca leucocephala* Rossi, 1790, the type species of *Metopia* Meigen, 1803);

(b) *curculionoides* Gory, 1832, as published in the binomen *Metopias curculionoides* (specific name of the type species of *Metopias* Gory, 1832);

(c) *vespoides* Scopoli, 1763, as published in the binomen *Sphex vespoides* (specific name of the type species of *Metopius* Panzer, 1806).

(4) The following names are hereby placed on the Official List of Family-Group Names in Zoology:

(a) METOPIAINI Townsend, 1908, type genus *Metopia* Meigen, 1803 (spelling emended in (1)(a) above) (Insecta, Diptera);

(b) METOPIASINI Raffray, 1904, type genus *Metopias* Gory, 1832 (spelling emended in (1)(b) above) (Insecta, Coleoptera);

(c) METOPIINAE Foerster, [1869], type genus *Metopius* Panzer, 1806 (Insecta, Hymenoptera).

(5) The following names are hereby placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology:

(a) METOPIINI Townsend, 1908 (spelling emended to METOPIAINI in (1)(a) above);

(b) METOPIINI Raffray, 1904 (spelling emended to METOPIASINI in (1)(b) above).

History of Case 2793

An application to remove the homonymy between the insect family-group names based on *Metopia* Meigen, 1803, *Metopias* Gory, 1832 and *Metopius* Panzer, 1806

was received from Drs Margaret K. Thayer & Alfred F. Newton, Jr. (*Field Museum of Natural History, Chicago, Illinois, U.S.A.*) and Thomas Pape (*Zoologisk Museum, Kobenhavn, Denmark*) on 9 October 1990. After correspondence the case was published in BZN **49**: 200–204 (September 1992). Notice of the case was sent to appropriate journals.

Dr M.G. Fitton (*The Natural History Museum, London, U.K.*) noted (in litt., December 1992) that Carlson (1980) demonstrated that the paper by Foerster, in which a family-group name based on *Metopius* Panzer, 1806 first appeared, was published in 1869, and not 1868 as stated in the application, and that [1869] is now used by most ichneumonid workers as the publication date for the large number of new taxa in Foerster's work.

Carlson, R.W. 1980. The dates of publication of Foerster's generic synopsis and Tschek's Pimplariae paper (Hymenoptera, Ichneumonidae). *Bulletin Entomologique de Pologne*, **50**: 121–126.

Decision of the Commission

On 1 December 1993 the members of the Commission were invited to vote on the proposals published in BZN **49**: 201–202. At the close of the voting period on 1 March 1994 the votes were as follows:

Affirmative votes — 24: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Hahn, Heppell, Holthuis, Kabata, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Uéno, Willink

Negative votes — none.

No votes were received from Halvorsen, Lehtinen and Savage.

Dupuis and Ride were on leave of absence.

Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

argyrocephala, *Tachina*, Meigen, 1824, *Systematische Beschreibung der bekannten europäischen zweiflügeligen Insekten*, vol. 4, p. 372.

curculionoides, *Metopias*, Gory, 1832, *Magasin de Zoologie*, **2**: pl. 42 [2 pp. text, 1 pl.].

Metopia Meigen, 1803, *Magazin für Insektenkunde (Illiger)*, **2**: 280.

METOPIAINI Townsend, 1908, *Smithsonian Miscellaneous Collections*, **51**(2): 64 (incorrectly spelled as METOPIINI).

Metopias Gory, 1832, *Magasin de Zoologie*, **2**: pl. 42 [2 pp. text, 1 pl.].

METOPIASINI Raffray, 1904, *Annales de la Société Entomologique de France*, **73**: 106 (incorrectly spelled as METOPIINI).

METOPIINAE Foerster, [1869], *Verhandlungen des Naturhistorischen Vereines der Preussischen Rheinlande und Westphalens*, **25**: 142.

METOPIINI Raffray, 1904, *Annales de la Société Entomologique de France*, **73**: 106 (an incorrect original spelling of METOPIASINI).

METOPIINI Townsend, 1908, *Smithsonian Miscellaneous Collections*, **51**(2): 64 (an incorrect original spelling of METOPIAINI).

Metopius Panzer, 1806, *Kritische Revision der Insektenfauna Deutschlands*, vol. 2, p. 78.

vespoides, *Sphex*, Scopoli, 1763, *Entomologia Carniolica, exhibens insecta Carnioliae indigena* ...., p. 296.

The following is the reference for the designation of *Sphex vespoides* Scopoli, 1763 as the type species of the nominal genus *Metopius* Panzer, 1806:

Viereck, H.L. 1912. *Proceedings of the Entomological Society of Washington*, **14**: 176.

OPINION 1773

Nacaduba Moore, [1881] (Insecta, Lepidoptera): given precedence over *Pepliphorus* Hübner, [1819]

Ruling

(1) Under the plenary powers the generic name *Nacaduba* Moore, [1881] is hereby given precedence over *Pepliphorus* Hübner, [1819] whenever the two names are considered to be synonyms.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:

(a) *Nacaduba* Moore, [1881] (gender: feminine), type species by original designation *Lampides prominens* Moore, 1877, with the endorsement that it is to be given precedence over *Pepliphorus* Hübner, [1819] whenever the two names are considered to be synonyms;

(b) *Pepliphorus* Hübner, [1819] (gender: masculine), type species by designation by Scudder (1875) *Papilio cyanea* Cramer, [1775], with the endorsement that it is not to be given priority over *Nacaduba* Moore, [1881] whenever the two names are considered to be synonyms.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *prominens* Moore, 1877, as published in the binomen *Lampides prominens* (specific name of the type species of *Nacaduba* Moore, [1881]);

(b) *cyanea* Cramer, [1775], as published in the binomen *Papilio cyanea* (specific name of the type species of *Pepliphorus* Hübner, [1819]).

(4) The name *Peplodyta* Toxopeus, 1929 is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology (a junior objective synonym of *Pepliphorus* Hübner, [1819]).

History of Case 2851

An application to conserve the generic name *Nacaduba* Moore, [1881] by giving it precedence over *Pepliphorus* Hübner, [1819] was received from Dr Toshiya Hirowatari (*College of Agriculture, University of Osaka Prefecture, Sakai, Osaka, Japan*) on 5 June 1992. After correspondence the case was published in BZN **50**: 35–38 (March 1993). Notice of the case was sent to appropriate journals.

It was noted on the voting paper that alternative approaches considered in the case were either (1) to set aside Scudder's (1875) designation of *Papilio cyanea* Cramer, [1775] as the type species of *Pepliphorus*, and to designate *Pepliphorus euchylas* Hübner, [1819] as the type in accordance with the small amount of usage the generic name has had, or (2) to suppress the name *Pepliphorus* (the *euchylas* group of species being currently included in *Jamides* Hübner, [1819], as noted in para. 5 of the application). However, Dr Hirowatari preferred the published course, in which the name *Pepliphorus* is retained for possible future use in the *cyanea* sense.

Decision of the Commission

On 1 December 1993 the members of the Commission were invited to vote on the proposals published in BZN **50**: 36. At the close of the voting period on 1 March 1994 the votes were as follows:

Affirmative votes — 19: Bayer, Bock, Cocks, Cogger, Corliss, Hahn, Heppell, Holthuis, Kabata, Kraus, Mahnert, Martins de Souza, Nielsen, Nye, Savage, Schuster, Trjapitzin, Uéno, Willink

Negative votes – 6: Bouchet, Macpherson, Minelli, Starobogatov, Štys and Thompson.

No votes were received from Halvorsen and Lehtinen.

Dupuis and Ride were on leave of absence.

Bouchet and Minelli commented that they would have preferred to set aside Scudder's (1875) designation of *Papilio cyanea* Cramer, [1775] as the type species of *Pepliphorus* Hübner, [1819] (alternative (1) noted above).

Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

cyanea, *Papilio*, Cramer, [1775], *De Uitlandsche Kapellen voorkommende in de drie Waereld-deelen Asia, Africa en America*, vol. 1, p. 120.

Nacaduba Moore, [1881], *The Lepidoptera of Ceylon*, vol. 1, part 3, p. 88.

Pepliphorus Hübner, [1819], *Verzeichniss bekannter Schmettlinge*, part 5, p. 71.

Peplodyta Toxopeus, 1929, *Tijdschrift voor Entomologie*, **70**: 230.

prominens, *Lampides*, Moore, 1877, *Annals and Magazine of Natural History*, (4)**20**: 341.

The following is the reference for the designation of *Papilio cyanea* Cramer, [1775] as the type species of the nominal genus *Pepliphorus* Hübner, [1819]:

Scudder, S.H. 1875. *Proceedings of the American Academy of Arts and Sciences*, **10**: 245.

OPINION 1774

Catocala connubialis Guenée, 1852 (Insecta, Lepidoptera): specific name conserved

Ruling

(1) Under the plenary powers the specific name *amasia* Smith, 1797, as published in the binomen *Phalaena amasia*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *connubialis* Guenée, 1852, as published in the binomen *Catocala connubialis*, is hereby placed on the Official List of Specific Names in Zoology.

(3) The name *amasia* Smith, 1797, as published in the binomen *Phalaena amasia* and as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 2811

An application for the conservation of the specific name of *Catocala connubialis* Guenée, 1852 was received from Dr Lawrence F. Gall (*Peabody Museum of Natural History, Yale University, New Haven, Connecticut, U.S.A.*) on 15 March 1991. After correspondence the case was published in BZN **49**: 196–199 (September 1992). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 December 1993 the members of the Commission were invited to vote on the proposals published in BZN **49**: 197–198. At the close of the voting period on 1 March 1994 the votes were as follows:

Affirmative votes — 24: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Hahn, Heppell, Holthuis, Kabata, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Štys, Thompson, Trjapitzin, Uéno, Willink

Negative votes — none.

No votes were received from Halvorsen, Lehtinen and Starobogatov.

Dupuis and Ride were on leave of absence.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

amasia, *Phalaena*, Smith, J.E., 1797, *The natural history of the rarer lepidopterous insects of Georgia including their systematic characters ...*, vol. 2, p. 179.

connubialis, *Catocala*, Guenée, 1852, *Histoire naturelle des insectes. Species général des Lépidoptères*, vol. 7 (Noctuelites), part 3, p. 105.

OPINION 1775

Banksinella luteolateralis var. *albothorax* Theobald, 1907 (currently *Aedes* (*Neomelaniconion*) *albothorax*), *B. luteolateralis* var. *circumluteola* Theobald, 1908 (currently *A.* (*N.*) *circumluteolus*) and *A.* (*N.*) *mcintoshi* Huang, 1985 (Insecta, Diptera): specific names conserved, and *A.* (*N.*) *albothorax*: neotype designated

Ruling

(1) Under the plenary powers:

(a) the type status of the holotype of *Banksinella luteolateralis albothorax* Theobald, 1907 is hereby set aside and specimen no. 16988 in the collection of the Department of Entomology, California Academy of Sciences, San Francisco, U.S.A. is designated as the neotype;

(b) the specific name *pallida* Theobald, 1907, as published in the trinomen *Banksinella luteolateralis* var. *pallida*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *albothorax* Theobald, 1907, as published in the trinomen *Banksinella luteolateralis* var. *albothorax* and as defined by the neotype designated in (1)(a) above;

(b) *circumluteola* Theobald, 1908, as published in the trinomen *Banksiella* [sic] *luteolateralis* var. *circumluteola*;

(c) *mcintoshi* Huang, 1985, as published in the binomen *Aedes* (*Neomelaniconion*) *mcintoshi*.

(3) The name *pallida* Theobald, 1907, as published in the trinomen *Banksinella luteolateralis* var. *pallida* and as suppressed in (1)(b) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 2852

An application for the conservation of the specific names of *Aedes* (*Neomelaniconion*) *albothorax* (Theobald, 1907), *A.* (*N.*) *circumluteolus* (Theobald, 1908) and *A.* (*N.*) *mcintoshi* Huang, 1985 in their accustomed usages was received from Dr Thomas J. Zavortink (*University of San Francisco, San Francisco, California, U.S.A.*) on 16 June 1992. After correspondence the case was published in BZN **50**: 39–43 (March 1993). Notice of the case was sent to appropriate journals.

Comments in support from Drs Kenneth J. Linthicum (*United States Armed Forces Institute of Medical Sciences, Bangkok, Thailand*), John F. Reinert (*Gainesville, Florida, U.S.A.*) and P.G. Jupp (*National Institute for Virology, University of the Witwatersrand, Sandringham, South Africa*) were published in BZN **50**: 234–235 (September 1993). Drs Linthicum and Jupp supplied many further references, very nearly all published since 1970, demonstrating the usage of the names.

Decision of the Commission

On 1 December 1993 the members of the Commission were invited to vote on the proposals published in BZN **50**: 41–42. At the close of the voting period on 1 March 1994 the votes were as follows:

Affirmative votes — 25: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Hahn, Heppell, Holthuis (part), Kabata, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Uéno, Willink

Negative votes — none.

No votes were received from Halvorsen and Lehtinen.

Dupuis and Ride were on leave of absence.

Holthuis voted against the suppression of the specific name of *Aedes* (*Neomelaniconion*) *pallida* (Theobald, 1907). He commented that the junior synonym *A.* (*N.*) *mcintoshi* Huang, 1985 had been published only fairly recently and might be confused with *A.* (*Ochlerotatus*) *macintoshi* Marks, 1959 (cf. para. 7 of the application).

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

albothorax, *Banksinella luteolateralis* var., Theobald, 1907, *A monograph of the Culicidae or mosquitoes*, vol. 4, p. 470.

circumluteola, *Banksiella* [recte *Banksinella*] *luteolateralis* var., Theobald, 1908, *Entomologist*, **41**: 107.

mcintoshi, *Aedes* (*Neomelaniconion*), Huang, 1985, *Mosquito Systematics*, **17**: 109.

pallida, *Banksinella luteolateralis*, Theobald, 1907, *A monograph of the Culicidae or mosquitoes*, vol. 4, p. 470.

OPINION 1776

Rana megapoda Taylor, 1942 (Amphibia, Anura): specific name conserved

Ruling

(1) Under the plenary powers the specific name *trilobata* Mocquard, 1899, as published in the binomen *Rana trilobata*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *megapoda* Taylor, 1942, as published in the binomen *Rana megapoda*, is hereby placed on the Official List of Specific Names in Zoology.

(3) The name *trilobata* Mocquard, 1899, as published in the binomen *Rana trilobata* and as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 2821

An application for the conservation of the specific name of *Rana megapoda* Taylor, 1942 was received from Dr Robert G. Webb (*University of Texas at El Paso, El Paso, Texas, U.S.A.*) on 8 May 1991. After correspondence the case was published in BZN **49**: 211–212 (September 1992). Notice of the case was sent to appropriate journals.

A comment in support from Prof Hobart M. Smith (*University of Colorado, Boulder, Colorado, U.S.A.*) was published in BZN **50**: 57–58 (March 1993).

Decision of the Commission

On 1 September 1993 the members of the Commission were invited to vote on the proposals published in BZN **49**: 211–212. At the close of the voting period on 1 March 1994 the votes were as follows:

Affirmative votes — 22: Bayer, Bock, Cocks, Cogger, Corliss, Hahn, Heppell, Holthuis, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin, Uéno, Willink

Negative votes — 3: Bouchet, Kabata and Thompson.

No votes were received from Halvorsen and Lehtinen.

Dupuis and Ride were on leave of absence.

Kabata commented that in his view the author of the application had not demonstrated that serious disturbance of nomenclatural stability would arise by restoring to use the senior synonym *Rana trilobata*. Savage reported that the holotype of *R. megapoda* is specimen no. 100025 in the Field Museum of Natural History, Chicago, U.S.A.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

megapoda, *Rana*, Taylor, 1942, *University of Kansas Science Bulletin*, **28**(2): 310.

trilobata, *Rana*, Mocquard, 1899, *Bulletin de la Société Philomatique de Paris*, (9)**1**(4): 158.

OPINION 1777

Anisolepis grilli Boulenger, 1891 (Reptilia, Squamata): specific name conserved

Ruling

(1) Under the plenary powers the following specific names are hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:

(a) *fitzingeri* Wiegmann, 1834, as published in the binomen *Laemanctus fitzingeri*;

(b) *obtusirostris* Wiegmann, 1834, as published in the binomen *Laemanctus obtusirostris*.

(2) The name *grilli* Boulenger, 1891, as published in the binomen *Anisolepis grilli*, is hereby placed on the Official List of Specific Names in Zoology.

(3) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:

(a) *fitzingeri* Wiegmann, 1834, as published in the binomen *Laemanctus fitzingeri* and as suppressed in (1)(a) above;

(b) *obtusirostris* Wiegmann, 1834, as published in the binomen *Laemanctus obtusirostris* and as suppressed in (1)(b) above.

History of Case 2802

An application for the conservation of the specific name of *Anisolepis grilli* Boulenger, 1891 was received from Prof Richard Etheridge (*College of Sciences, San Diego State University, San Diego, California, U.S.A.*) and Dr Ernest E. Williams (*Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, U.S.A.*) on 3 December 1990. After correspondence the case was published in BZN **49**: 217–220 (September 1992). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 December 1993 the members of the Commission were invited to vote on the proposals published in BZN **49**: 218–219. At the close of the voting period on 1 March 1994 the votes were as follows:

Affirmative votes – 23: Bayer, Bock, Cocks, Cogger, Corliss, Hahn, Heppell, Holthuis, Kabata, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Thompson, Trjapitzin, Uéno, Willink

Negative votes — 1: Štys.

Bouchet abstained.

No votes were received from Halvorsen and Lehtinen.

Dupuis and Ride were on leave of absence.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

fitzingeri, Laemanctus, Wiegmann, 1834, *Herpetologia Mexicana, seu descriptio amphibiorum Novae Hispaniae* ... Pars prima, saurorum species amplectens ..., p. 46.

grilli, *Anisolepis*, Boulenger, 1891, *Annali del Museo Civico di Storia Naturale di Genova*, (2)**10**: 909.

obtusirostris, *Laemanctus*, Wiegmann, 1834, *Herpetologia Mexicana, seu descriptio amphibiorum Novae Hispaniae* ... Pars prima, saurorum species amplectens ..., p. 46.

INFORMATION AND INSTRUCTIONS FOR AUTHORS

The following notes are primarily for those preparing applications; other authors should comply with the relevant sections. Applications should be prepared in the format of recent parts of the Bulletin; manuscripts not prepared in accordance with these guidelines may be returned.

General. Applications are requests to the Commission to set aside or modify the Code's provisions as they relate to a particular name or group of names when this appears to be in the interest of stability of nomenclature. Authors submitting cases should regard themselves as acting on behalf of the zoological community and the Commission will treat applications on this basis. Applicants are advised to discuss their cases with other workers in the same field before submitting applications, so that they are aware of any wider implications and the likely reactions of other zoologists.

Text. Typed in double spacing, this should consist of numbered paragraphs setting out the details of the case and leading to a final paragraph of formal proposals. Text references should give dates and page numbers in parentheses, e.g. 'Daudin (1800, p. 39) described . . .'. The Abstract will be prepared by the Secretariat.

References. These should be given for all authors cited. Where possible, ten or more relatively recent references should be given illustrating the usage of names which are to be conserved or given precedence over older names. The title of periodicals should be in full and be underlined; numbers of volumes, parts, etc. should be in arabic figures, separated by a colon from page numbers. Book titles should be underlined and followed by the number of pages and plates, the publisher and place of publication.

Submission of Application. Two copies should be sent to: The Executive Secretary, The International Commission on Zoological Nomenclature, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. It would help to reduce the time that it takes to process the large number of applications received if the typescript could be accompanied by a disk with copy in IBM PC compatible format, preferably in ASCII text. It would also be helpful if applications were accompanied by photocopies of relevant pages of the main references where this is possible.

The Commission's Secretariat is very willing to advise on all aspects of the formulation of an application.

Comments

On the proposed attribution of the specific name of *Ceratites nodosus* to Schlotheim, 1813, and the proposed designation of a lectotype (Cephalopoda, Ammonoidea). E.T. Tozer 147

On the proposed conservation of *Hydromantes* Gistel, 1848 by the designation of *Salamandra genei* Temminck & Schlegel, 1838 as the type species (Amphibia, Caudata). M.R. Jennings; H.A. Dundee; G. Mancino; B. Lanza; R.G. Webb; M.G. Paris; W.R. Branch; D.A. Good; R.F. Inger; D.M. Hillis; F.R. Cook; R.C. Stebbins; M.J. Cox *et al.* 149

On the proposed conservation of HEMIDACTYLIINI Hallowell, 1856 (Amphibia, Caudata). R.G. Webb; H.A. Dundee; M.G. Paris; M.J. Cox; R.A. Thomas; D.M. Hillis; F.R. Cook; H. Ota; P. Chippindale; R.C. Stebbins *et al.* 153

On the proposed designation of a neotype for *Coelophysis bauri* (Cope, 1887) (Reptilia, Saurischia). P. Huber 156

Rulings of the Commission

OPINION 1765. *Fusus* Helbling, 1779 (Mollusca, Gastropoda): suppressed, and *Fusinus* Rafinesque, 1815 and *Colubraria* Schumacher, 1817: conserved 159

OPINION 1766. *Tortaxis* Pilsbry, 1906 and *Allopeas* Baker, 1935 (Mollusca, Gastropoda): conserved by the designation of a neotype for *Achatina erecta* Benson, 1842 162

OPINION 1767. *Pleurobranchus forskalii* Rüppell & Leuckart, [1828] and *P. testudinarius* Cantraine, 1835 (Mollusca, Gastropoda): specific names conserved . 164

OPINION 1768. *Taningia danae* Joubin, 1931 (Mollusca, Cephalopoda): given precedence over *Octopodoteuthis persica* Naef, 1923. 166

OPINION 1769. *Styloptocuma* Băcescu & Muradian, 1974 (Crustacea, Cumacea): conserved with *S. antipai* Băcescu & Muradian, 1974 designated as the type species 168

OPINION 1770. *Pachyrhynchus* Germar, 1824, *Somatodes* Schönherr, 1840 and the specific name of *Pachyrhynchus moniliferus* Germar, 1824 (Insecta, Coleoptera): conserved 170

OPINION 1771. *Cryptophagus advena* Waltl, 1834 (currently *Ahasverus advena*; Insecta, Coleoptera): specific name conserved 172

OPINION 1772. METOPIINI Raffray, 1904 (Insecta, Coleoptera): spelling emended to METOPIASINI, and METOPIINI Townsend, 1908 (Insecta, Diptera): spelling emended to METOPIAINI, so removing the homonymy with METOPIINAE Foerster, [1869] (Insecta, Hymenoptera) 174

OPINION 1773. *Nacaduba* Moore, [1881] (Insecta, Lepidoptera): given precedence over *Pepliphorus* Hübner, [1819] 176

OPINION 1774. *Catocala connubialis* Guenée, 1852 (Insecta, Lepidoptera): specific name conserved 178

OPINION 1775. *Banksinella luteolateralis* var. *albothorax* Theobald, 1907 (currently *Aedes* (*Neomelaniconion*) *albothorax*), *B. luteolateralis* var. *circumluteola* Theobald, 1908 (currently *A.* (*N.*) *circumluteolus*) and *A.* (*N.*) *mcintoshi* Huang, 1985 (Insecta, Diptera): specific names conserved, and *A.* (*N.*) *albothorax*: neotype designated. 179

OPINION 1776. *Rana megapoda* Taylor, 1942 (Amphibia, Anura): specific name conserved 181

OPINION 1777. *Anisolepis grilli* Boulenger, 1891 (Reptilia, Squamata): specific name conserved 182

Information and Instructions for Authors 184

CONTENTS

Page

Notices 89
Fourth Edition of the International Code of Zoological Nomenclature 90
The International Code of Zoological Nomenclature 90
Official Lists and Indexes of Names and Works in Zoology — Second Supplement to 1990 90
Bulletin of Zoological Nomenclature — Back Copies 91
Bulletin of Zoological Nomenclature — Crustacea and Mollusca Offprints 91
The European Association for Zoological Nomenclature 91

General Article

Towards a polynomial system of zoological nomenclature? A response to the proposals of D.S. Yu (1993). E.E. Spamer & A.E. Bogan 92

Applications

Fursenkoina Loeblich & Tappan, 1961 (Foraminiferida): proposed conservation. S.A. Revets 98
Chromadora Bastian, 1865 and *Euchromadora* de Man, 1886 (Nematoda): proposed conservation of usage by the designation of *C. nudicapitata* Bastian, 1865 as the type species of *Chromadora*. P.A.A. Loof. 102
Xerophila geyeri Soós, 1926 (currently *Trochoidea geyeri*; Mollusca, Gastropoda): proposed conservation of the specific name. E. Gittenberger 105
A.A.H. Lichtenstein's (1796, 1797) *Catalogus musei zoologici ... Sectio tertia. Continens Insecta* and D.H. Schneider's (1800) *Verzeichniss einer Parthei Insekten ...*: proposed suppression, with conservation of some Lichtenstein (1796) names (Insecta and Arachnida). I.M. Kerzhner 108
Bhatia Distant, 1908 (Insecta, Homoptera): proposed confirmation of *Eutettix? olivaceus* Melichar, 1903 as the type species. M.D. Webb 116
Rhopalosiphum monardae Davis, 1911 (currently *Hyalomyzus monardae*; Insecta, Homoptera): proposed conservation of the specific name. D.J. Voegtlin 118
Scarabaeus rufus Moll, 1782 (currently *Aphodius rufus*), *Scarabaeus rufus* Fabricius, 1792 (currently *Aegialia rufa*) and *Scarabaeus foetidus* Herbst, 1783 (currently *Aphodius foetidus*) (Insecta, Coleoptera): proposed conservation of usage of the specific names. F.-T. Krell, Z. Stebnicka & E. Holm 121
Ischyrus Lacordaire, 1842, *Lybas* Lacordaire, 1842, *Mycotretus* Lacordaire, 1842 and *Megischyrus* Crotch, 1873 (Insecta, Coleoptera): proposed conservation. P.E. Skelley & M.A. Goodrich. 128
Lithobius piceus L. Koch, 1862 (Chilopoda): proposed conservation of the specific name. E.H. Eason 133
Regnum Animale ..., Ed. 2 (M.J. Brisson, 1762): proposed rejection, with the conservation of the mammalian generic names *Philander* (Marsupialia), *Pteropus* (Chiroptera), *Glis*, *Cuniculus* and *Hydrochoerus* (Rodentia), *Meles*, *Lutra* and *Hyaena* (Carnivora), *Tapirus* (Perissodactyla), *Tragulus* and *Giraffa* (Artiodactyla). A. Gentry 135

Continued on Inside Back Cover

Printed in Great Britain by Henry Ling Ltd., at the Dorset Press, Dorchester, Dorset

Volume 51, Part 3, 30 September 1994 pp. 185–292 ISSN 0007–5167

THE NATURAL
- 4 OCT 1994
PURCHASED
ZOOLOGY LIB

The Bulletin of Zoological Nomenclature

ICZN The Official Periodical of the International Commission on Zoological Nomenclature

THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

The *Bulletin* is published four times a year for the International Commission on Zoological Nomenclature by the International Trust for Zoological Nomenclature, a charity (no. 211944) registered in England. The annual subscription for 1994 is £85 or $165, postage included; the rate for 1995 will be £88 or $170. All manuscripts, letters and orders should be sent to:

The Executive Secretary,
International Commission on Zoological Nomenclature,
c/o The Natural History Museum,
Cromwell Road,
London, SW7 5BD, U.K. (Tel. 071-938 9387)

INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Officers

President	Prof Dr O. Kraus (*Germany*)
Vice-President	Dr H. G. Cogger (*Australia*)
Secretary-General	Dr I. W. B. Nye (*United Kingdom*)
Executive Secretary	Dr P. K. Tubbs (*United Kingdom*)

Members

Dr F. M. Bayer (*U.S.A.: Corallia*)
Prof W. J. Bock (*U.S.A.; Ornithology*)
Dr P. Bouchet (*France; Mollusca*)
Dr L. R. M. Cocks (*U.K.; Brachiopoda*)
Dr H. G. Cogger (*Australia; Herpetology*)
Prof J. O. Corliss (*U.S.A.; Protista*)
Prof C. Dupuis (*France; Heteroptera*)
Prof Dr G. Hahn (*Germany; Trilobita*)
Prof Dr O. Halvorsen (*Norway; Parasitology*)
Mr D. Heppell (*U.K.; Mollusca*)
Prof L. B. Holthuis (*The Netherlands; Crustacea*)
Dr Z. Kabata (*Canada; Copepoda*)
Prof Dr O. Kraus (*Germany; Arachnology*)
Dr P. T. Lehtinen (*Finland; Arachnology*)
Dr E. Macpherson (*Spain; Crustacea*)
Dr V. Mahnert (*Switzerland; Ichthyology*)
Prof U. R. Martins de Souza (*Brazil; Coleoptera*)
Prof A. Minelli (*Italy; Myriapoda*)
Dr C. Nielsen (*Denmark; Bryozoa*)
Dr I. W. B. Nye (*U.K.; Lepidoptera*)
Prof W. D. L. Ride (*Australia; Mammalia*)
Prof J. M. Savage (*U.S.A; Herpetology*)
Prof Dr R. Schuster (*Austria; Acari*)
Dr Y. I. Starobogatov (*Russia; Mollusca*)
Dr P. Štys (*Czech Republic; Heteroptera*)
Dr F. C. Thompson (*U.S.A.; Diptera*)
Dr V. A. Trjapitzin (*Russia; Hymenoptera*)
Dr Shun-Ichi Uéno (*Japan; Entomology*)
Prof A. Willink (*Argentina; Hymenoptera*)

Secretariat

Dr P. K. Tubbs (*Executive Secretary and Editor*)
Mr J. D. D. Smith, B.Sc., B.A. (*Scientific Administrator*)
Mrs A. Gentry, B.Sc. (*Zoologist*)

Officers of the International Trust for Zoological Nomenclature

Dr S. Conway Morris, F.R.S. (*Chairman*)
Dr M. K. Howarth (*Secretary and Managing Director*)

© International Trust for Zoological Nomenclature 1994

THE NATURAL HISTORY MUSEUM
- 4 OCT 1994
PURCHASED
ZOOLOGY LIBRARY

BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 51, part 3 (pp. 185–292) 30 September 1994

Notices

(a) *Invitation to comment.* The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles.* At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications.* The following new applications have been received since going to press for volume 51, part 2 (published on 30 June 1994). Under Article 80 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) *Hapalotrema* Looss, 1899 (Digenea): proposed designation of *H. loossi* Price, 1934 as the type species. (Case 2932). T.R. Platt & D. Blair.

(2) *Eudistoma* Caullery, 1909 (Tunicata): proposed conservation. (Case 2933). P. Kott.

(3) *Bagrus hoevenii* Bleeker, 1847 (currently *Hemibagrus hoevenii*; Osteichthyes, Siluriformes): proposed designation of a neotype. (Case 2934). M. Kottelat, K.K.P. Lim & P.K.L. Ng.

(4) *Lirobarleeia* Ponder, 1983 (Mollusca, Gastropoda): proposed designation of *Alvania nigrescens* Bartsch & Rehder, 1939 as the type species. (Case 2935). J. Hertz & W. Ponder.

(5) *Cacoxenus indagator* Loew, 1858 (Insecta, Diptera): proposed conservation of the generic and specific names. (Case 2937). V.S. Sidorenko.

(6) EUCNEMIDAE Eschscholtz, 1829 (Insecta, Coleoptera): proposed precedence over MELASIDAE Fleming, 1821. (Case 2938). J. Muona.

(7) *Galba* Schrank, 1803 (Mollusca, Gastropoda): proposed designation of *Buccinum truncatulum* Müller, 1774 as the type species. (Case 2939). Ya.I. Starobogatov.

(8) *Riisea* and *riisei* (Cnidaria, Anthozoa): proposed conservation as the correct original spellings of generic and specific names based on the surname Riise by Duchassaing & Michelotti, 1860. (Case 2940). F.M. Bayer & M. Grasshoff.

(9) *Nepa rustica* Fabricius, 1781 (currently *Diplonychus rusticus*; Insecta, Heteroptera): proposed conservation of the specific name and designation of a lectotype. (Case 2941). J.T. Polhemus & I.M. Kerzhner.

(10) *Chen* Boie, 1822 (Aves, Anseriformes) and generic names ending in *-chen*: proposed fixation of the gender as masculine. (Case 2942). R.K. Brooke & W.J. Bock.

(11) *Aporcelaimus* Thorne & Swanger, 1936 (Nematoda): proposed designation of *Dorylaimus superbus* de Man, 1880 as the type species. (Case 2943). P.A.A. Loof & J. Heyns.

(d) *Ruling of the Commission.* Each Opinion, Declaration or Direction published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin.*

Fourth Edition of the International Code of Zoological Nomenclature

Recent issues of the *Bulletin* have referred to the availability of a discussion draft of a new edition of the Code. However, the final stages of the preparation of this draft have been held up and it is still not available for distribution. As soon as the draft is ready copies will be sent without charge to all subscribers to the *Bulletin* and to members of the American and European Associations for Zoological Nomenclature. Any other institution or individual may order a copy from the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD. The cost of printing and postage is about £3 or US$5. Bank charges on currency exchange make it uneconomic to pay this amount except in sterling or US dollars. The draft of the Code will therefore be sent free of charge, but those able to pay in sterling or US dollars are asked to enclose a cheque for £3 or US$5 to cover the cost.

Before completing the definitive text of the Fourth Edition, the Commission will (in accordance with Article 16 of its Constitution) take into account all comments and suggestions on the draft submitted within one year of its original distribution.

The International Code of Zoological Nomenclature

The Third Edition (published 1985) supersedes all earlier versions and incorporates many changes.

Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., c/o NHB Stop 163, National Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £19 or $35, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £15 or $29; payment should accompany orders.

Official Lists and Indexes of Names and Works in Zoology — Second Supplement to 1990

The Official Lists and Indexes of Names and Works in Zoology was published in 1987. This book gives details of all the names and works on which the Commission has ruled since it was set up in 1895; there are about 9900 entries.

Copies can be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., c/o NHB Stop 163, National Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £60 or $110, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £40 or $75; payment should accompany orders.

In the five years 1986–1990, 946 names and five works were added to the Official Lists and Official Indexes. A supplement has been prepared giving these additional entries, together with some amendments and updatings to entries in the 1987 volume. Copies can be obtained without charge from either of the above addresses.

Bulletin of Zoological Nomenclature — Back Copies

Back copies of all the volumes of the *Bulletin*, and of most volumes of the *Opinions and Declarations* that were published concurrently with vols. 1–16 of the *Bulletin*, are still available. Prices on application to I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.

Bulletin of Zoological Nomenclature — Crustacea and Mollusca Offprints

The International Trust for Zoological Nomenclature is offering a subscription for individual zoologists wishing to receive offprints of all cases in particular disciplines. For an annual payment of £15 or $25 subscribers will receive copies of all Applications, Comments and Opinions relating to either the Crustacea or Mollusca as soon as they are published in the *Bulletin of Zoological Nomenclature*. Offprints are available back to 1980.

Orders for offprints relating to either the Crustacea or the Mollusca should be sent to I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K., with payment at the rate of £15 or $25 for each year requested.

The European Association for Zoological Nomenclature

The European Association for Zoological Nomenclature has been established to facilitate liaison between European zoologists and the Commission, and to support the Commission's work. Members will receive a yearly Newsletter with information on the activities of the Association and Commission, and will be able to buy the *Code* and the *Official Lists and Indexes* at substantial discounts.

The Association's President is Dr V. Mahnert (Switzerland), the Vice-President Dr I.M. Kerzhner (Russia), the Secretary Dr E. Macpherson (Spain) and the Treasurer Dr M.A. Alonso-Zarazaga (Spain). Other members of the Inaugural Council are Dr H.M. André (Belgium), Dr J.-P. Hugot (France), Prof. A. Minelli (Italy) and Dr C. Nielsen (Denmark). Membership of the Association is open to all European zoologists; further details can be obtained from Dr M.A. Alonso-Zarazaga, Museo Nacional de Ciencias Naturales, José Gutiérrez Abascal 2, 28006 Madrid, Spain.

Towards a harmonized bionomenclature for life on Earth

Report of the IUBS/IUMS exploratory meeting on harmonization between Codes of Nomenclature held on 16–18 March 1994 at the International Mycological Institute, Egham, Surrey, U.K.

Edited by David L. Hawksworth (Chairman), John McNeill, Peter H.A. Sneath, R. Piers Trehane & Philip K. Tubbs

Contents

Foreword	188
Executive Summary	189
1. Background	191
2. The current state of bionomenclature	193
(a) The current status of the Codes	193
(b) Decision making processes	193
(c) Nomenclatural filters	195
3. Issues to be addressed	196
(a) Harmonization of terms	196
(b) Suprafamilial ranks	198
(c) Co-ordinate status of names	198
(d) Infraspecific ranks	199
(e) Italicization of scientific names	201
(f) Author citations	201
(g) Lists of protected names	202
(h) Registration and valid publication	204
(i) Electronic publication	205
(j) Ambiregnal organisms	206
(k) Inter-Code homonyms	208
(l) Part- and form-taxon nomenclature	209
(m) Gender of epithets	210
4. Future prospects	210
(a) Prospects and principles of a Biological Code	210
(b) Future liaison and the role of IUBS	212
5. Participants	213
6. Bibliography	214
7. Abbreviations and acronyms	216

Foreword

I was very pleased to participate in this important Exploratory Meeting on *Harmonization between the Codes of Biological Nomenclature*. Those working with bionomenclature have to devote time to being lawyers as well as scientists.

Bionomenclature has relevance to two major issues of topical concern: biodiversity and its key relevance to the sustainable use of Earth's resources, the subject of the

---

This Report has been published by the International Union of Biological Sciences as Special Issue 30 (1994) of *Biology International*. It appears here in the same form, with only minimal alterations.

Convention on Biological Diversity, and the importance of modern technologies made available to the producers and users of names of organisms. Molecular biological approaches are shedding new light on the extent of the living world and also require a re-thinking of the relationships between many groups of organisms. Furthermore, modern information and communication facilities provide new avenues for research, training and using the resources of biological nomenclature.

The long-term benefit of a satisfactory bionomenclatural framework is not always appreciated, yet it is fundamental to all who work with or utilize the products of the living world. Bionomenclature has to address problems of stability, accessibility, simplicity, and communicability. These matters need to be considered in any outputs for users.

The prospects include a unified Code for the bionomenclature of organisms to operate from a date in the future, and also an increasing harmonization between the existing Codes dealing with the nomenclature of the past. There is also a need to teach the principles and practice of bionomenclature more widely so that biologists will understand what is involved and how the perceived problems are being addressed. This should be an integral part of biodiversity training programmes. The planned publication of an authoritative glossary agreed at the meeting will be especially important in this regard.

I am pleased that this Exploratory Meeting was able to identify steps that can be taken to move these issues forward in a positive way.

On behalf of the International Union of Biological Sciences (IUBS), I would like to express our deep appreciation of the contributions and support provided by the International Union of Microbiological Societies (IUMS), the International Association for Plant Taxonomy (IAPT), the Royal Society of London, and CAB INTERNATIONAL. The Linnean Society of London generously hosted a reception for participants. Finally, I wish to express sincere thanks to Professor David L. Hawksworth, Director, and Ms Marilyn S. Rainbow, both of the International Mycological Institute, for arranging, graciously hosting, and taking all steps to ensure the success of this landmark meeting.

T. Younès
Executive Director, IUBS
Paris, 24 May 1994

Summary

The Exploratory Meeting on Harmonization between Codes of Nomenclature, convened at Egham on 16–18 March 1994 in accordance with a Resolution of the General Assembly of the International Union of Biological Sciences (IUBS), and with the support of the International Union of Microbiological Societies (IUMS), the International Association for Plant Taxonomy (IAPT), the Royal Society of London, and CAB INTERNATIONAL. The following text was agreed by all participants at the concluding session of the Meeting.

The Meeting:

1. *Recognizes* the crucial importance of scientific names of organisms in global communication to all concerned with the conservation, management, trade in, and use of the world's resources.

2. *Agrees* that it would be highly advantageous to work towards a unified system of biological nomenclature, and *notes* that the XVI International Botanical-Congress in Japan in 1993 established a Special Committee on Harmonizing Codes.
3. *Recognizes* that while there are differences in procedures between the current Codes, which could not be reconciled for the nomenclature of the past without an unacceptable disruption of names in use, there is considerable scope for harmonization which is to be actively pursued.
4. *Considers* that the availability of lists of published names, and the registration of new names in bacteriology, botany, virology and zoology, will make possible the harmonization of nomenclatural procedures in biology.
5. *Agrees* to work towards producing a *Glossary of Biological Nomenclature*, including both official and unofficial terms.
6. *Recommends* that, considering divergent rules and traditions concerning author citations for scientific names, use of such citations be made optional (and be recommended only in a strictly taxonomic context), as is already the case in zoology.
7. *Recognizes* the need to develop common procedures for the nomenclatural treatment of fossils, with particular emphasis on form genera and other parataxa, and to this end *recommends* IUBS in cooperation with international and national bodies such as the Systematics Association and the Palaeontological Association, to organize a discussion meeting on this topic.
8. *Agrees* that the nomenclature of infraspecific taxa in ranks not regulated by the three main Codes is most appropriately regulated by international specialist commissions or groups (e.g. International Society for Plant Pathology Subcommitee on the Taxonomy of Phytopathogenic Bacteria for pathovars of bacteria, International Commission for the Nomenclature of Cultivated Plants for cultivars of plants).
9. *Encourages* international, national, and other agencies to initiate and support current initiatives in compiling lists of names in current use and other catalogues of names, to be made accessible through hard copy and electronic media.
10. *Notes* the rapid advances in electronic media for the storage of and access to taxonomic information, and the opportunities they provide in relation to inventorying the world's currently known and unknown biota, and *encourages* the IUBS Commission on Taxonomic Databases, in collaboration with the Special Committee on Electronic Publishing and Databasing, to prepare proposals for consideration by the pertinent nomenclatural committees.
11. *Recognizes* the particular nomenclatural problems posed by ambiregnal organisms, that is those treated under different Codes, *considers* that small modifications to the Codes can accommodate these organisms to ensure that the names used will be unique, and *recommends* that while discussions continue authors should avoid exacerbating the problems.
12. *Appreciates* the confusion that can be caused by the existence of homonyms in use under the different Codes, and *recommends* that (a) authors of new generic names avoid proposing a name established under another Code for a

different taxon, and (b) provisions are introduced into each Code to disallow new generic names that are junior homonyms under any Code.

13. *Recognizes* the importance of continuing the dialogue started at, and implementing actions identified by, the Exploratory Meeting, *recommends* that an inter-union IUBS/IUMS International Commission on Bionomenclature (ICB) be established in 1994, and *suggests* that the new Commission includes a delegate representing each of the current five Codes, together with representatives from key user bodies (e.g. FAO, UNEP, IUCN, UNESCO, WHO).
14. *Recommends* that the organizers of the Fifth International Congress of Systematic and Evolutionary Biology (ICSEB V), to be held in Budapest in 1996, include a session to review progress towards harmonization and other aspects of bionomenclature.

1. Background

The name by which an organism is known is vital for two reasons: it is the key to all the accumulated human knowledge about its characters, utility, ecology, biology, and history, and also the medium by which communication between all biologists is effected. The issues relating to the naming of organisms are therefore high on the agenda of the two major international unions representing the biologists of the world, the International Union of Biological Sciences (IUBS) and the International Union of Microbiological Societies (IUMS).

With world attention focussed on biological diversity, and the realization that perhaps 10% or less of the Earth's biota has so far been named (Hammond, 1992; Systematics Agenda 2000, 1994), the need to maximize the effectiveness of the system of naming organisms of all groups has never been greater.

The process by which names for all living and fossil organisms that inhabit Earth have universally accepted forms is currently regulated by five internationally mandated bodies operating under the aegis of either IUBS or IUMS and each issuing a periodically revised series of rules or a Code of nomenclatural practices. These bodies are the:

General Committee on Botanical Nomenclature (GC),
International Commission for the Nomenclature of Cultivated Plants (ICNCP),
International Committee on Systematic Bacteriology (ICSB),
International Commission on Zoological Nomenclature (ICZN),
International Committee on Taxonomy of Viruses (ICTV).

Each of these bodies has a unique history and tradition, but increasingly they have issues in common to confront, not only in meeting the demands resulting from issues arising from the biodiversity lobby, but further in relation to the scientific re-evaluation and classification of phyla between kingdoms, the challenges posed by molecular approaches, and the new horizons opened up by innovations in electronic communications and data processing.

IUBS has been aware for some time of the need to keep the systems of biological nomenclature under review, and on the occasion of the Third International Congress of Systematic and Evolutionary Biology (ICSEB III) in Brighton, U.K., in July 1985 it convened a workshop 'to study future developments of the various Codes of nomenclature' following a session organized by the Systematics Association on 'Codes of Nomenclature' (Ride & Younès, 1986).

Recognizing that name changes for non-scientific reasons continue to inconvenience all users of the scientific names of organisms, IUBS, in collaboration with the International Association for Plant Taxonomy (IAPT) and the Systematics Association, organized the first major international meeting convened specifically to address the stability of names. This meeting, 'Improving the Stability of Names: Needs and Options' was held in Kew on 20–22 February 1991, and attracted 123 participants from 20 countries (Hawksworth, 1991).

It became clear at the Kew meeting that there were more common issues to confront than had widely been appreciated, and the matter was considered further at the 24th General Assembly of IUBS held in Amsterdam on 1–6 September 1991 (Younès, 1992). That Assembly passed a Resolution on Biological Nomenclature which, amongst other things:

> '*ENCOURAGES those concerned with biological nomenclature actively to seek ways of increasing harmonization in the various Codes, for example, with regard to the protection of names in current use, the registration of newly proposed names, the treatment of protists, homonymy between different groups, and where possible, the use of identical terms.*'

As a first step in the implementation of this Resolution, an Exploratory Meeting on 'Harmonization between Codes of Nomenclature', comprising official representatives of the five different Codes together with selected other biologists with particular experience on specific topics to be considered, was convened at the International Mycological Institute (an Institute of CAB INTERNATIONAL) in Egham on 16–18 March 1994 under the joint auspices of IUBS, IUMS, and the International Association for Plant Taxonomy (IAPT), together with support from CAB INTERNATIONAL, the Linnean Society of London, and the Royal Society of London. We believe that the strength of this support, together with the high level of representation fielded by the current nomenclatural bodies, reflects the current desire to place the nomenclature of living organisms on as secure a basis as practicable with the advancement of science.

This Meeting was scheduled for March 1994 as at that time: (1) the editing of the text of the 1994 Tokyo edition of the International Code of Botanical Nomenclature was largely complete; (2) the discussion draft of the new edition of the International Code of Zoological Nomenclature was undergoing finalization by the ICZN prior to wide distribution for comment; (3) the ICSB would meet during the IUMS Bacteriology Division Congress in Prague in July 1994; (4) a new edition of the International Code of Nomenclature for Cultivated Plants was being actively planned; (5) the ICTV had adopted new procedures for the treatment of names of viruses at the IUMS Virology Division Congress in Glasgow in August 1993; and (6) a report with any recommended actions could then be presented to the 25th General Assembly of IUBS in Paris on 5–9 September 1994.

Prior to the start of the Exploratory Meeting, and in order to ensure that issues of concern were not overlooked, each of the nominated representatives of the different Codes was invited to submit both topics for discussion and background papers for circulation to other participants in advance of the occasion.

This report of the discussions and agreed Executive Summary of the Exploratory Meeting is presented here to open up and stimulate new debate on the issues identified, without prejudice to any future decisions, and so to expedite progress

towards increased harmonization between the various international bodies involved. Indeed, it is essential that the widest possible spectrum of biosystematists and other users of names contribute to the resolution of the issues raised. This is necessary to ensure that any changes in operating procedures are based on the broadest possible constituency of biologists.

2. The Current State of Bionomenclature

(a) The Current Status of the Codes

The current (third) edition of the Zoological Code is that of 1985 (International Commission on Zoological Nomenclature, 1985). The ICZN is working towards a fourth edition; the Editorial Committee met in Hamburg in October 1993. Under the Constitution of the ICZN, a discussion draft has to be available to the zoological community for comment for one year. The draft is expected later in 1994 and it is anticipated that the new Code will be published in 1996 and become operational in 1997. A major change in emphasis in the draft is to attach somewhat more attention to usage than to priority of publication.

The editing of the text of the Tokyo edition of the Botanical Code, revised in accordance with decisions at the XV International Botanical Congress held in Yokohama in August-September 1993, was now almost complete and publication in June 1994 was anticipated (Greuter *et al.*, 1994a). This edition differs significantly from the previous edition published in 1988, many of the changes representing a convergence with, rather than a divergence from, other Codes.

The ICNCP is moving towards a total revision of the Cultivated Plant Code (Brickell *et al.*, 1980), which it is planned to finalize after a symposium being convened in Seattle by the Commission in August 1994. The new edition was expected in 1995, and there was a desire to ensure that this was fully compatible with the Botanical Code.

The Bacteriological Code was revised completely in the mid-1970s and is working well with the new starting-point date of 1980. Changes since the 1976 edition have been minor, the latest revision being issued in 1992 (Sneath, 1992). Infraspecific plant pathogenic bacteria are considered by the International Society for Plant Pathology (ISPP) Subcommittee on Taxonomy of Phytopathogenic Bacteria, which has issued lists of approved pathovar names and minimum standards for their naming; the most recent available list was published in 1991 (Young *et al.*, 1991) and a revision is planned for late 1994.

In the case of the viruses, there are Rules and Guidelines (Francki *et al.*, 1990) rather than a formal Code, virologists working by good-will rather than regulation. It has, however, been suggested that these are tightened and transformed into a Code. At the Virology Congress in 1993 various changes were made.

There has been some discussion as to the merits or otherwise of a separate Code for protoctistan (protist) groups (Corliss, 1993), but workers in the field were now focussing their attention on bringing about changes in the current Codes to cater for the difficulties they were experiencing.

(b) The Decision Making Processes

Decision making under the Botanical Code falls into two main domains: those concerning rules and those concerning individual names. Everything relating to the

rules has to be dealt with by the Nomenclature Section of an International Botanical Congress, and there are no restrictions on those who can register for the Congress and thereby participate in the Section meetings. Before the Congress, proposals normally have to be published in the IAPT's journal *Taxon*; a synopsis of the proposals is then presented with comments by two rapporteurs. An exploratory mail ballot of IAPT personal members is held, and the results are made available to the members of the Nomenclature Section. The proposals are debated and voted at the Section meeting; transcripts of these discussions are edited and published (e.g. Greuter *et al.*, 1994b). Section actions are then ratified by means of a formal Resolution passed at the final plenary session of the Congress, normally a formality. There are six group-orientated Permanent Committees that work between Congresses, whose main task is to consider proposals to conserve or reject names, which also have to be published in *Taxon*, and also Special Committees established by the Section to examine particular issues and normally instructed to report to the next Congress. The Permanent Committees report through a General Committee (GC) which has responsibility for botanical nomenclature between Congresses. Reports of the various Committees are published in *Taxon*. The operation of botanical nomenclature is described in detail by McNeill & Greuter (1986).

The International Commission for the Nomenclature of Cultivated Plants (ICNCP) meets largely as determined by the Chair when a revision of the Code is considered to be opportune. There is no democratic process, the Chair inviting persons from different applied disciplines to a meeting convened at an appropriate occasion, for example the International Symposium on the Taxonomy of Cultivated Plants being held in Seattle in 1994. The Chair is appointed by IUBS. The Commission then works on the Code and arranges for its publication. There is a move to increase democratic participation and this will be discussed at the Seattle Symposium. There is no official journal in which proposed changes can be published.

The procedures in zoology were originally on lines similar to those for the Botanical Code, but have been modified since the last International Congress of Zoology was held in Monaco in 1972. The present position is that under the Constitution of the International Commission on Zoological Nomenclature (ICZN), amendments to the Zoological Code have to be published for one year prior to final approval. The discussion draft of the forthcoming edition for the Code is being made widely available at nominal or no cost. Comments received on the draft are considered first by the Editorial Committee and then by the Commission. The final version is decided by the voting of the ICZN, which has members from 19 countries, and has to be ratified by IUBS, the body under whose auspices the Commission operates.

Decisions on *ad hoc* issues in zoology, notably those relating to names or published works, are taken by the ICZN. The Commission has plenary power to set aside any provision of the Code whenever that is judged to be in the best interests of stability. Proposals have to be published for at least six months in the *Bulletin of Zoological Nomenclature*, and in addition notices of proposed actions are sent to journals relevant to the group concerned. Comments received are also published in the *Bulletin*, and, when the flow of these has ceased, voting papers are sent to the members of the ICZN. A two-thirds majority is needed to approve the use of the plenary power.

The ICZN meets at IUBS General Assemblies and ICSEB, and can be convened at other congresses. All Committees of the ICZN are established by its President.

The International Committee on Systematic Bacteriology (ICSB) is part of IUMS and comprises members elected by societies that are affiliated to IUMS, each of which can propose 1–3 members for each nation. Members serve while the nominating societies wish them to continue so to do, and the ICSB can also co-opt others when necessary. There is an elected Judicial Commission of about twelve members plus the officers *ex officio*; currently 17 in total. The Commission takes decisions but these have to approved by the ICSB and the IUMS Bacteriology Division Congress. Code changes are made by the Judicial Commission following publication a year in advance, but it has wide powers with respect to wording in particular. *Ad hoc* decisions on particular cases are taken by a two-thirds majority on the basis of requests published in the *International Journal of Systematic Bacteriology* (IJSB), published, and finally ratified by the next Congress.

The ICSB appoints Subcommittees which are responsible for the taxonomy of a specified group of organisms. These are not regulated in number or size, and can be created or dissolved according to need; there are currently about 30. A key role for the Subcommittees is the establishment of minimal standards for the description of taxa in those groups; these now exist for six groups. The Subcommittees report by minutes published in the IJSB, and deal with taxonomic and methodological developments.

Virus nomenclature is controlled by the International Committee on the Taxonomy of Viruses (ICTV), a committee of the Virology Division of IUMS. The ICTV consists of an Executive Committee and national representatives, and a new Executive is formed at each Virology Congress. The Executive Committee consists of individual members and the chairs of subcommittees responsible for different areas of virology. The President decides which subcommittees are required, the Executive votes for chairs of those, and the subcommittee chairs select their own members and establish Study Groups. The Study Groups bring taxonomic and nomenclatural proposals to the subcommittee and thence to the Executive. The Executive then votes on acceptability, and the ICTV Plenary Session at each Congress votes formally on any changes in the rules. Proposed changes *may* be aired in the Virology Division News section of the *Archives of Virology* or in any conventional publication. The 'News' also publishes minutes of ICTV plenary sessions. The rules for viruses are evolving rapidly at present; the present emphasis is on taxonomic structures. Species are examined at the Study Group level, and if accepted are included in the ICTV Report published after each Congress that is a complete taxonomic description of virus taxa.

(c) Nomenclatural Filters

The steps through which names are sieved in the process of determining the correct nomenclature of a taxon can be viewed as a nomenclatural filter. This diagrammatic approach, first used by Jeffrey (1973), was felt to be helpful to users of the Codes both as a flow chart and to identify cases where terms were used in similar senses. The various steps, and the terminology of those steps, are summarized in Figure 1, indicating equivalent terms where appropriate (see also Table 1).

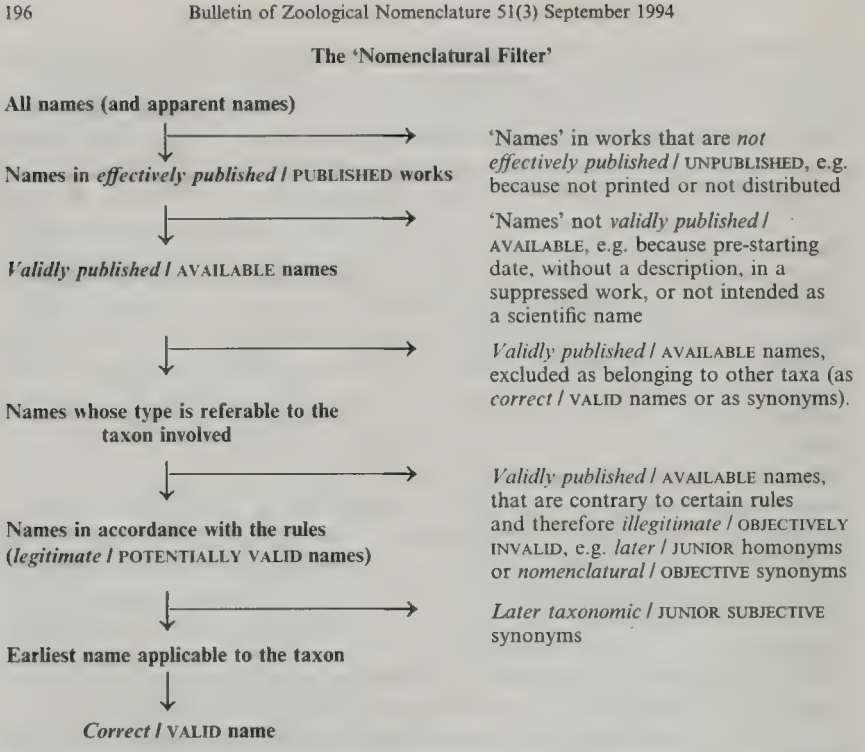
The 'Nomenclatural Filter'
All names (and apparent names)
'Names' in works that are *not effectively published* / UNPUBLISHED, e.g. because not printed or not distributed
Names in *effectively published* / PUBLISHED works
'Names' not *validly published* / AVAILABLE, e.g. because pre-starting date, without a description, in a suppressed work, or not intended as a scientific name
Validly published / AVAILABLE names
Validly published / AVAILABLE names, excluded as belonging to other taxa (as *correct* / VALID names or as synonyms).
Names whose type is referable to the taxon involved
Validly published / AVAILABLE names, that are contrary to certain rules and therefore *illegitimate* / OBJECTIVELY INVALID, e.g. *later* / JUNIOR homonyms or *nomenclatural* / OBJECTIVE synonyms
Names in accordance with the rules (*legitimate* / POTENTIALLY VALID names)
Later taxonomic / JUNIOR SUBJECTIVE synonyms
Earliest name applicable to the taxon
Correct / VALID name

Fig. 1. *The Nomenclatural Filter*. The steps to be taken in determining the name of an organism appear in the left-hand column. *Italic* type signifies terms used in the Botanical Code; SMALL CAPITAL type the equivalent terms in the Zoological Code (see also Table 1).

Further information on terms and their definition discussed during the Meeting is being incorporated into a Glossary.

3. Issues to be Addressed

(a) Harmonization of Terms

Identical words are used in different ways or for different concepts in the various Codes. This is a potential source of ambiguity, but most of the differences are not in kind but rather in terminology.

As a component of the Biotaxonomy and Nomenclature Programme of IUBS, its 24th General Assembly saw 'advantage in the preparation of a comprehensive Glossary of Biological Nomenclature covering officially recognized and also unofficial terms used throughout biological nomenclature' (Younès, 1992). A rough draft compilation of both official and unofficial terms used in biological nomenclature had been compiled as part of the background material for the Meeting for discussion as how best to fulfil the IUBS suggestion.

The equivalence in meaning of some of the different 'official' terms was discussed, and the more widely used of these are arranged as equivalents in Table 1.

Table 1. *Botanical and Zoological equivalent terms*

Botanical Code	Zoological Code
Effective publication	Publication
Effectively published	Published
Not effectively published	Unpublished
Validity	Availability
Valid/Validly published	Available
Invalid	Unavailable
Legitimacy	[————]
Legitimate	Potentially valid
Illegitimate	Objectively invalid
Correctness	Validity
Correct	Valid
Incorrect	Subjectively invalid
Homonymy & synonymy	Homonymy & synonymy
Earlier homonym/synonym	Senior homonym/synonym
Later homonym/synonym	Junior homonym/synonym
Nomenclatural synonym	Objective synonym
Taxonomic synonym	Subjective synonym

It was felt that a *Glossary* that could be used in common by all Codes would go a long way towards harmonization, and that it should be designed so as to give guidance as to what terms should be used, perhaps with comparative tables of equivalents. Examples could be particularly helpful for students. Such a glossary would need to be widely available, and this could perhaps be achieved by simultaneous publication in three or more outlets familiar to different disciplines.

The General Committee on Botanical Nomenclature was independently mandated by the XV IBC in 1993 to produce a glossary of terms used in botanical nomenclature. The botanical entries could perhaps be taken as fulfilling that mandate if this were made open as a draft for comment by all botanists. In zoology, the glossary is part of the Code, but in principle harmonized terms and definitions could be taken into the forthcoming fourth edition during its consultative phase. Bacteriology could potentially take on some terms from other areas and use them in common.

Because this work needs to proceed with care, as a second stage it was considered appropriate to produce a *Draft Glossary of Bionomenclature* for wide distribution as a working document for refinement. A third stage would be the release of a Glossary with at least the approval of the appropriately mandated nomenclatural bodies. An optional fourth stage would be recognition as official definitions by, for example, the XVI International Botanical Congress in 1999. Terms could then be 'plucked-out' and included in individual Code glossaries.

In order to reach the second stage participants agreed to supply comments on the tabled rough draft for incorporation prior to the wider circulation of the *Draft Glossary*.

The Meeting agrees to work towards producing a Glossary of Biological Nomenclature, including both official and unofficial terms used in biological nomenclature.

(b) Suprafamilial Ranks

While the long-standing issue of the acceptability of the term 'phylum' as an alternative to 'division' had now been approved at the XV International Botanical Congress in 1993, as a result of molecular studies there was currently a tendency to introduce names at ranks higher than that of kingdom, for example 'domains', 'empires', and 'superkingdoms'. The Botanical Code specifies the order and names to be used for all ranks, although it dos not legislate priority above the rank of family. In contrast, the Zoological Code does not concern itself in any way with ranks above that of superfamily.

As the number of names for suprafamilial ranks is relatively small, this issue was perhaps best left to specialists or specialist committees and not regulated further. Usage was an especially important consideration as changes in very high groupings would not be readily accepted by users and would tend to bring efforts to standardize nomenclature into disrepute.

No advantage in further regulation was felt to be desirable, and advantage was seen in using descriptive names rather than ones based on an included genus. The use of standardized endings for particular ranks above kingdom would be desirable when a particular practice had come into general use. Nomenclature should not attempt to interfere with taxonomy.

There could, however, be an advantage in specifying in the *Glossary* the generally used hierarchy of the terms for ranks above kingdom.

The Botanical Code uses standardized endings for taxa above that of family and up to phylum, and the Bacteriological Code employs those same terminations up to and including order. However, this is not so in zoology, and the zoological practice could lead to other difficulties (see below).

(c) Co-ordinate Status of Names

In the Zoological Code, names are arranged in categories: species-group, genus-group, and family-group names. Names may change in rank within those groups, for example species to subspecies, but the author citations and dates remain the same. Name changes are limited to the suffix of family-group names. This is a very flexible principle limiting name changes with change of rank, but tending to foster them with changes in generic limits because subspecies names can compete with those at species level. The principle works very well, but is unique to that Code. Indeed this is perhaps *the* main difference from the Bacteriological and Botanical Codes in which a name only has priority within its rank, rather than within a group of ranks.

While aspects of the concept had been considered for possible adoption in the Botanical Code in the past (e.g. Weresub, 1979), it merits more critical evaluation. The principle could be acceptable in both bacteriology and botany if it operated only downwards and not in both directions; i.e. the name of a species would automatically be usable at subspecies rank, but not *vice versa*. To do otherwise would be unacceptably destabilizing as numerous well-established names in the principal ranks would otherwise be threatened. Downward coordination would have been an elegant solution to the treatment of autonyms in the Botanical Code as revised at the XIII

International Botanical Congress in Sydney in 1981. If such a proposal were linked with the adoption of a single infraspecific rank in botany (see below), that could facilitate its acceptance.

In some cases in zoology, limiting the principle to downward applications could be less disruptive than maintaining the *status quo*, although the ICZN has the mechanism to deal with cases of particular difficulty. It was noted that the Botanical Code, as revised at the Tokyo Congress in 1993, now also had mechanisms for the rejection and conservation of names in most ranks (Greuter & Nicolson, 1993; Hawksworth, 1993; Nicolson & Greuter, 1994).

A further aspect to co-ordinate status was that in Botany the same epithet can be used for names at different ranks within the same genus when the taxa involved are based on different types, whereas this is not permissible in the Zoological Code.

Proposals to bring downward co-ordinate status into the Bacteriological and Botanical Codes should be explored for discussion by the International Committee on Systematic Bacteriology and at the next International Botanical Congress respectively. Particular attention would need to be given to effects on nomenclatural stability should downward co-ordination operate retroactively, but this was unlikely to cause major disruptions.

A linked but separate issue is that in the Zoological Code an epithet has priority regardless of the genus in which it is placed. For example, if a species is moved into a genus in which the same epithet is already in use for a taxon with a different type, that just transferred is retained if it was published earlier than the epithet already existing in the genus; the latter epithet is then treated as a 'junior secondary homonym'. The opposite situation occurs under the Botanical Code where it is the whole combination, and not just the epithet, that is critical for determining the priority of homonyms. Consequently, in botany, only the taxon whose taxonomic position is being altered is at risk of a change in epithet.

An example of this would be the case of two imaginary species first described as *Antonia barbara* Smith 1900 and *Claudia barbara* Larousse 1850. If Freunde placed these taxa in the genus *Gemma* in 1960 and 1975 respectively, a situation of homonymy would have arisen in 1975. Under the Botanical Code the existing combination *Gemma barbara* (Smith 1900) Freunde 1960 would remain correct, and Larousse's epithet *barbara* of 1850 would have to be replaced. In zoology, however, the older epithet of Larousse would maintain its priority; *Gemma barbara* (Larousse 1850) would be a correct name and the species denoted by the junior epithet *barbara* Smith 1900 would have to be renamed.

(d) Infraspecific Ranks

In practice there is often inconsistency in the use of the terms 'subspecies' and 'variety' in botany, the two being used interchangeably according to different schools, while other authors recognize broadly geographical subspecies and locally or regionally distributed varieties. The Botanical Code currently recognizes five such ranks, while the Bacteriological and Zoological Codes only have that of subspecies. In zoology any name published as a 'variety' or 'form' before 1961 can in principle be treated as a name in the species-group; any published after that date are ruled as unavailable (i.e. not validly published). The Bacteriological Code, because the situation was so tangled, decided not to regulate names below the rank of subspecies,

and recognizes only 'subgenus' as a subdivision of a genus. However, bacteriologists were now questioning whether the retention of the ranks of subgenus and subspecies was worthwhile.

It was also a matter of convenience when to regulate and when not to. Regulation should focus on the ranks most crucial for communication.

The ranks of 'variety' and 'form' were viewed as somewhat outmoded. They were used principally at a time when the biological status of populations was not understood, but 'variety' had often persisted in botany for what might be better regarded as subspecies. However, as the names of many infraspecific botanical taxa had never been catalogued or typified, the abandoning of the regulation of names below that of subspecies could help limit nomenclatural changes arising from such names. The Bacteriological Code recommends the avoidance of 'variety', and regards it as identical to 'subspecies' for nomenclatural purposes.

While it was recognized that some workers, especially with plants, still utilized the rank of 'form', the need to regulate this in any way was questionable and certainly priority might be made non-obligatory at that rank.

It was also important to stress, as highlighted by Meregalli (1993), that the terms subspecies and variety should not be used for what are really 'cultivars'. The Cultivated Plant Code seemed to be catering for user needs, although the desirability of bringing it as close as possible to the Botanical Code was recognized. Consideration might be given to the possibility of the Cultivated Plant Code also covering cultivated variants of mushrooms and other fungal strains developed by humans. Parallel problems occur with domesticated animals, but there is no formal regulation and the Zoological Code specifies that it covers taxa that are 'known to exist in nature'; this issue, and also that of hybrids, are aspects of the Zoological Code that merit further exploration.

There seemed to be no sound reason for changing the procedures used for the regulation of pathovar names of plant pathogenic bacteria. The current system was a compromise which appeared to be working well (Young *et al.*, 1991). Plant pathologists have a need for a system of infraspecific names for taxa important as agents of plant disease. The Bacteriological Code also recognizes the terms biovar, chemovar, cultivar, morphovar, phagiovar, and serovar; there is no priority or restriction on the kinds of names used. If there is confusion, a specialist group such as that in existence for the plant pathogenic bacteria can resolve the situation amongst themselves.

In the case of viruses, the current rules specify that infraspecific nomenclature is the responsibility of specialist groups, and also specifically exclude laboratory constructed hybrids and engineered organisms. The Bacteriological Code does not mention hybrids nor other genetically manipulated organisms, and its standing on this issue could be clarified to state that they are best regulated by specialist groups.

The Meeting agrees that the nomenclature of infraspecific taxa in ranks not regulated by the three main Codes is most appropriately regulated by international specialist commissions or groups (e.g. International Society for Plant Pathology Subcommitee on the Taxonomy of Phytopathogenic Bacteria for pathovars of bacteria, International Commission for the Nomenclature of Cultivated Plants for cultivars of plants).

(e) Italicization of Scientific Names

The Editorial Committee for the Tokyo edition of the International Code of Botanical Nomenclature decided, for the purposes of consistency, to print scientific names in all ranks covered by the Code in italic type in the Code itself. This practice is already the norm in some leading botanical journals (e.g. *Plant Systematics and Evolution*), and will now be followed in *Taxon* and perhaps in other botanical journals.

The Bacteriological Code states that all scientific names regulated by it are to be distinguished in a different type face, such as italic. The Zoological Code recommends that for genus- and species-group names a type face be used which is different from the rest of the text. The Zoological Code makes no recommendation for names of families and higher ranks.

The adoption of different type faces makes it clear at a glance whether a higher taxon name was being regulated by a Code and used in a formal scientific or a colloquial sense, for example *Bryophyta* / bryophytes, *Fungi* / fungi, *Ascomycetes* / ascomycetes. The problem is especially acute in English where the vernacular language designations for higher units are often identical to the scientific ones.

The use of italics for all scientific names in zoology could cause difficulties because some higher taxon names would look like genus-group names if they were italicized. Some generic names could easily be mistaken for the names of superfamilies or orders. For example, the butterfly generic name *Ornithoptera* Boisduval 1832 could be an insect order name, and the gastropod generic name *Nuculoidea* Williams & Breger 1916 has the form of a superfamily name. While the use of standardized terminations obviates this risk in botany, this is not the case in zoology where not all terminations are standardized. However, the italicization of names above the rank of genus is not precluded by the Zoological Code.

The matter was viewed as essentially one of editorial standards and practices. Indeed, the Editorial Committee of the Botanical Code did not make this issue a recommendation. The Exploratory Meeting saw advantages in using separate type-faces for all scientific names as standard practice across biology, and the zoologists present suggested the use of small capitals as was already the practice of the ICZN for family-group names in its official publications. There could be flexibility, for example using all italics in publications dealing only with bacteria and botanical groups, but small capitals for names above the rank of genus in zoological publications or ones including zoological as well as other taxa.

(f) Author Citations

In zoology, authors transferring an epithet to a different genus or to a different rank are not usually cited; after transfer the name of the original author of the epithet is simply placed in parenthesis. In contrast, in botany the name of the author combining the epithet into a different position or rank is retained. The basis of this difference in practice relates in part to the issue of co-ordinate status (see above); in zoology priority dates from the original author and is unchanged regardless of alterations in rank or combination, whereas in botanical groups the date of the transfer is critical as it is the whole combination and not just the original epithet that determines priority. In botany priority is important for the purposes of homonymy, which operates for the whole combination, and synonymy, which operates within a rank.

While it was recognized that such basic principles could not easily be reconciled for the past, this was not necessarily so for the future, especially if there were protected lists of some kind. It would be important to evaluate any loss of information in order to decide which is the most preferable course to adopt from a date in the future.

When it comes to citing authors, the current recommendation in the Botanical Code is either to give names in full or to abbreviate them according to a standard system. Attention was drawn to the compilation of almost 30 000 names of authors of scientific names across all botanical groups, together with recommended abbreviations, that has recently been prepared (Brummitt & Powell, 1992).

In bacteriology and zoology, there is no mandatory recommendation on the provision of author citations, the practice being to omit citations for familiar taxa.

Whether authors' names should be cited or not was seen partly as an educational matter. They are now the fashion for botanical names in biological literature generally and not only for taxonomic publications. This involves considerable cost and also time if verification is carefully conducted. In many instances it is superfluous, for example in labelling in botanical gardens, and is often misleading where author names are added uncritically without direct reference to the original source of the name. It should be made clear from some point in the future that these are devices for nomenclaturally interested taxonomists that are only of benefit to a wide user community when applied critically.

It was noted that in some journals the editorial practice is to require author citations only for scientific names *not* in a specified checklist. In non-taxonomic works, the general view of the Meeting was that it was preferable for authors to be encouraged to indicate the checklist, flora, fauna, etc., or other basis of the identifications and names used. This was considered to be of more value than adding citations uncritically from unspecified sources.

The Meeting recommends that, considering divergent rules and traditions concerning author citations for scientific names, use of such citations be made optional (and be recommended only in a strictly taxonomic context), as is already the case in zoology.

(g) Lists of Protected Names

Four lists of names in current use for which protected nomenclatural status was being sought had been generated under a scheme proposed in botanical nomenclature (Greuter *et al.*, 1993a, b, c; Jarvis *et al.*, 1993), but not yet authorized by an International Botanical Congress; in 1993 the scheme achieved 55% of the votes rather than the 60% required for adoption. However, the continuation of exploration of that avenue towards increased nomenclatural stability was authorized at the Tokyo Congress. This meant that there were six years in which to refine those lists so that the issue could be reconsidered by the XVI International Botanical Congress at St Louis in 1999. It was envisaged that such lists would become an integral part of the nomenclatural system for botanical groups by a modest change in the Code that would provide for the protection of lists names on a family or ordinal basis when they become sufficiently authoritative.

In addition, the Botanical Code has two other methods of protection: 'sanctioning', introduced in 1981 to prevent earlier names of fungi which had not been adopted in what had formerly been starting-point books from being taken up

(Korf, 1983); and 'conservation and rejection' of names, which can overrule sanctioned names, and was opened up to names in all major ranks at the Tokyo Congress.

The protection of Names in Current Use (NCUs) was seen as more efficient than conservation as it would give them protection against other unlisted names (not only specified ones, as in normal conservation procedures), and the date, typification, gender, and orthography would also be fixed.

In zoology, 'Official Lists and Indexes' of names and of works already exist. The practice has been to deal only with names where a problem existed, and the Commission then makes a decision as to which name should be placed on the Official List. Major catalogues of names were also available, for example Sherborn's *Index Animalium* (Sherborn, 1902–33), the *Nomenclator Zoologicus* (Neave *et al.*, 1939–1993), and the *Zoological Record*. A list of the approximately 400 000 generic names ever used in zoology is currently in preparation; it is planned to have this available on CD-ROM in the near future. That generic list will have no official nomenclatural status, and so will be equivalent to the *Index Nominum Genericorum* (*Plantarum*) (Farr *et al.*, 1979).

However, the discussion draft of the next edition of the Zoological Code would include enabling legislation so that, on the initiative of a group of zoologists interested in a particular field, the ICZN will be able to 'protect' a list of names with dates and types. Such a list would have a closing date, and no relevant name published before that date would have any nomenclatural status unless it were recorded on the list.

There were major differences in scale between the different groups due to the number of names to be handled, but it was accepted that even within speciose groups certain families or orders were relatively well-known and some protection could be considered. The experience of the bacteriologists was pertinent; the Gordian Knot was cut by producing a list of names, publishing it as a draft, and opening it up for addition by other bacteriologists, particularly through subcommittees concerned with particular groups. The *List of Approved Names* (Skerman *et al.*, 1989) for bacteria was a new starting-document for the group, and includes about 2330 names in all; 130 suprageneric names, 300 generic names, and 1900 species names.

It was noted that the sequence of protecting names had different consequences under the current Codes. In the Botanical Code a specific epithet was validly published only if the name of the genus in which it appeared was valid, whereas this point was treated as irrelevant in zoology.

There are two major approaches to the issue of protected names: a method of what is effectively 'block conservation', or a new starting document which devalidates all unlisted names. The latter approach was accepted by bacteriologists as it avoids arguments as to whether or not an unlisted name should have been included on the list. It is essentially pragmatic, but omitted names can be reinstated, then taking priority only from the date they are revived. This decision needs to be made clearly, but there appears to be no reason why a protected NCU or other officially approved list for a group could not serve as a new starting document.

It was necessary to aim for a practical solution rather than a perfect one, but to incorporate a mechanism to 'fix-it' when something appeared to have gone wrong.

The production of lists, although greatly facilitated by advances in computer technology, is necessarily a laborious task in need of external funding. The current initiatives should be seen as part of an interdisciplinary package working towards a common goal of relevance to the whole of biology. They therefore merit appropriate financial support.

The Meeting encourages international, national, and other agencies to initiate and support current initiatives in compiling lists of names in current use and other catalogues of names, to be made accessible through hard copy and electronic media.

(h) Registration and Valid Publication of Names

In bacteriology new names have to be published in the *International Journal of Systematic Bacteriology* (IJSB). They are permitted to be effectively published elsewhere, but validation is the responsibility of the authors who are required to submit a reprint to the IJSB for inclusion on the validation lists; priority is by a list of running numbers based on the time that manuscripts were received, or even page number within an issue of the IJSB.

The principle of registration as a new mandatory requirement for the valid publication of names was accepted at the XV International Botanical Congress in 1993, subject to ratification at the XVI Congress in 1999, and if so approved will come into effect in 2000. The structure to support the procedure of registration is currently under discussion. The principle is similar in concept to the practice operational in bacteriology, but would not involve publication in a single journal. The critical date was envisaged as that of the submission for registration. A decentralized date-stamping system was being contemplated that could involve national offices working under an agreement with the International Association for Plant Taxonomy (IAPT). The publications and pertinent documentation would then be routed, directly or indirectly, to what are at present indexing centres. The names would then be published in the existing indices (e.g. *Index Kewensis*, *Index of Fungi*), which would be registers for that category of included names (perhaps distinguished typographically). Some orphan groups without indexing centres would have to be covered by IAPT. By 2000, an electronic accessioning and networking system was likely to be in existence.

It was envisaged that: (1) major journal publishers would automatically submit issues of their journals for registration in order not to add to the work of the authors; (2) authors could submit material directly themselves; and (3) persons other than the author could forward material that had not been registered for whatever reason. Authors would be free to send material to any registration office, and not necessarily that in their own country.

In the case of zoology, the *Zoological Record* (published by Biosis International) is the proposed *de facto* registration office for new names, and could be mandated to have this role, but the onus will be on authors and editors to submit material in journals not scanned by the *Zoological Record*. The proposed date for purposes of priority is that of the original publication of the material.

Around 8000 names of taxa in botanical groups appear each year, compared with 10 20 000 in zoological groups and 150–200 in bacteria. Although large overall, the scale was considered to be manageable.

Plant virus names were maintained in the Virus Identification Data Exchange (VIDE) database at CAB INTERNATIONAL, from which hard-copy products were produced (e.g. Brunt *et al.*, 1990), and plans were being formulated by ICTV to produce a universal virus database.

The process of registration for plant cultivar names was started in the 1950s and mainly operates genus by genus, with individual societies or groups of specialists taking responsibility for particular groups. Registration of the name is the responsibility of the person developing the cultivar. The different International Registration Authorities (IRAs) also check that names submitted have not been used previously in that group and that no rules in the Cultivated Plant Code have been contravened. As individual registrars have to interpret the rules, differences in practice can occur. In the orchids, for which the Royal Horticultural Society has IRA responsibility, there are around 3000 applications to register new cultivar names each year. The registration authorities are required to publish periodic lists of registered names. There are many cases with multiple usages of the same name within a genus, the record being about 70 uses of 'Defender' in the genus *Dianthus*. Cultivar names were of crucial importance with respect to names used in plant patents and plant breeders' rights and this posed some difficulties as these have statutory status.

Concern was expressed as to the failure of those concerned with biodiversity and conservation issues to make the link between their indexing procedures and nomenclatural practice. The Meeting considered that there needed to be a far greater awareness of this issue and of the vulnerability of the current indexing authorities to both market conditions and the policies of the disparate organizations operating them. Firm long-term financial mechanisms should be devised in collaboration with appropriate international agencies.

(i) Electronic Publication

The potential of electronic media in connection with the production of compendia of names, and also for the registration of names (see above), was enormous. However, it was unclear how electronic mail access systems in particular might be funded. The costs of indexing and incorporating names into the system should not be forgotten. The involvement of international funding agencies would be essential if a comprehensive system across the whole range of organisms were ever to be realized.

While a readily accessible system was seen as an ideal, some toll-gate or other system would be unavoidable where funds had to be generated to pay for the indexing effort involved, just as is the case for current hard-copy indexing products.

The Botanical and Zoological Codes at present do not consider electronic means as a method of effective publication, but a Special Committee on Electronic Publication was set up at the XV International Botanical Congress in 1993 to consider this question. The time may not yet have come to move away from paper publication, but this would have to be accommodated in due course. However, there was a desire not to encourage the piecemeal publication of unrefereed material of dubious quality by permitting authors to input material directly into databases.

The issue was of considerable relevance to biodiversity inventorying, with the prospect of descriptions of enormous numbers of new species. Mound (*in* Hawksworth & Mound, 1991) calculated that if there were 10 million species of

insects, at two pages per species this would require 80 000 volumes and occupy 1.6 km of shelving. Apart from storage, the cost of publishing specialized monographs which have very low sales potential is becoming increasingly difficult.

The problem posed by the magnitude of biodiversity must be faced by the biosystematic community. One option would be a combination of published abstracts linked to an archival electronic database (perhaps copied in 3–5 different centres around the world) so that the fuller data were available when required. CD-ROM storage was another option meriting serious consideration, in that it does appear to be as permanent as paper and is also published at one point in time; moreover, it is not dissimilar from a microfiche in needing a device to be read.

This was a matter which required further exploration and on which all Codes could potentially develop a common policy.

The Meeting notes the rapid advances in electronic media for the storage of and access to taxonomic information, and the opportunities they provide in relation to inventorying the world's currently known and unknown biota, and encourages the IUBS Commission on Taxonomic Databases, in collaboration with the Special Committee on Electronic Publishing and Databasing, to prepare proposals for consideration by the pertinent nomenclatural committees.

(j) Ambiregnal Organisms

Ambiregnal organisms, that is those that have or could be treated under more than one of the current Codes, pose particular nomenclatural problems (Patterson & Larsen, 1991, 1992; Corliss, 1993) and constituted one of the main reasons for the Meeting. Workers in certain protistan groups, such as the dinoflagellates, sooner or later come up against such cases.

Ambiregnal organisms can have more than one 'correct' name, depending upon which Code is applied to them. The problem can apply to the generic name and/or the specific epithet, and to the typification of genera.

For example, the euglenoid generic name *Entosiphon* B. Stein 1878, which has been widely used, is valid under the Zoological Code, but under the Botanical Code it has been replaced by *Entosiphonomonas* Larsen & Patterson 1991 since the angiosperm name *Entosiphon* Beddome 1864 is an earlier homonym.

A more complex and less certain case is that of *Peranema* Dujardin 1841. Dujardin first named his genus *Pyronema* Dujardin in 1836 but then realized this name could be confused with the fungal genus *Pyronema* Carus 1835 published the previous year. Later, *Trachelius trichophorus* Ehrenb. 1838 was combined into *Peranema* as *P. trichophorus* (Ehrenb.) B. Stein 1878, with one of the three original species of Dujardin's genus (*P. protracta* Dujardin 1841) as a synonym; this is one of the best known heterotrophic euglenids used for teaching purposes.

From the botanical standpoint, *Peranema* G. Don 1825 is a genus of ferns so Dujardin's name would be rejected as a later homonym. The organism then has to be called *Pseudoperanema* Christen 1962, based on a different type, if considered as a 'plant', the most appropriate taxonomic placement, but *Peranema* is acceptable if it is treated as an 'animal'. This case is especially awkward as the type in botany is then *Pseudoperanema hyalinum*, whereas in zoology and in *Peranema* it is *P. trichophorum* (syn. *P. protracta*). The generic names and the types thus both differ depending on the taxonomic viewpoint. This case is discussed further by Larsen (1987).

The problems arise for the following reasons:

Independence of the Botanical and Zoological Codes.
Latin diagnoses required in the Botanical Code.
Differences in starting-point dates.
Differences in typification procedures.
Coordination of ranks in the Zoological Code.
Tautonyms not permitted by the Botanical Code.
Basionym citation required by the Botanical Code.
Differences in nomenclatural terms and their meanings.
Homonyms in one Code but not in the other.
Conventional type material is often lacking.
Lack of indication of ambiregnal issues in papers.
Lack of a list of names in current use.
Different ranks used up to at least family.

At present the decisions are essentially those of individual authors and some way of enabling problems to be handled in a consistent manner is required to resolve the current instability and confusion. As up to about 30 000 named species are involved this is not a matter that can be dismissed as of little consequence. The situation has to be resolved.

It would be possible to separate the taxonomic and nomenclatural issues by ruling which Code should be used for which group. In the case of the Botanical Code as revised in 1993, it is explicitly stated that it covers groups traditionally treated under it regardless of the kingdoms to which they are currently taxonomically referred (i.e. including cyanobacteria, fungi, slime moulds, and certain protists). Special provisions for ambiregnal organisms could be included in that Code provided the groups to which they were applied were clearly defined. The removal of an entire group from a Code under which it has traditionally been treated would be particularly destabilizing and should be avoided.

Ambiregnal questions are not unique to protistan groups, and the treatment of names of *Cyanobacteria* is also a cause of uncertainty. The Botanical Code had traditionally handled these organisms, and it was now made clear in it that they are still covered by it. Cyanobacterial names are not included in the *Approved Lists of Bacterial Names*, and a considerable number of cyanobacteria have no living type strains but are represented by dried type specimens. There had been a proposal for a separate Code of Nomenclature for *Cyanobacteria*, but the Meeting felt that this would be most inappropriate in the current climate. In a parallel manner, it would be destabilizing to consider that *Myxomycota* (syn. *Mycetozoa*), as a protistan phylum, should be switched from its traditional treatment under the Botanical Code to the Zoological Code (Weresub, 1979).

The nomenclatural ambiguities posed by ambiregnal organisms could perhaps be resolved by a general decision that the correct name for a protistan (or cyanobacterium, slime mould, etc.) is the oldest name which is valid for it under *any* Code and not a homonym under *another* Code. Each Code could contain an Article to this effect, and the usual safeguards to protect general usage against destabilizing adoption of strict priority would apply.

Alternatively, homonymy might be waived for certain groups, provided that there were no homonyms within the same group; a protist having the same name as a

vascular plant or insect was unlikely to cause a problem in practice. The definition of the groups involved would require particular care. The permitting of tautonyms in the Botanical Code from a particular date should also be considered.

A mechanism for collaboration between the nomenclatural committees and commissions concerned with groups with ambiregnal organisms could be helpful to rule on particular cases, but there would also be advantage in having a meeting of specialists on this topic before changes were made in the Codes.

The question of living cultures as types for microbial groups was a long-standing area of difference between the Bacteriological and Botanical Codes. However, some convergence between these two Codes on this issue was now evident. The 1994 edition of the Botanical Code made clear, by means of a voted example, that cultures permanently preserved in a metabolically inactive state (i.e. stored in liquid nitrogen or freeze-dried) were acceptable as nomenclatural types. Conversely, now that DNA could be recovered by polymerase chain reaction (PCR) technology from dried material, bacteriologists could find dried or other uncultured material acceptable. The use of DNA types in botany had already been proposed by two mycologists (Reynolds & Taylor, 1991), but this was not accepted at the XV International Botanical Congress in 1993.

The 'epitype' concept introduced into the Botanical Code in 1993 could be helpful in typifying protist names; in zoology 'neotypes' were sometimes used for what otherwise would be *nomina dubia*, and the term 'pragmatype' had been proposed unofficially in zoology for parallel situations.

The Meeting recognizes the particular nomenclatural problems posed by ambiregnal organisms, that is those treated under different Codes, considers that small modifications to the Codes can accommodate these organisms to ensure that the names used will be unique, and recommends that while discussions continue authors should avoid exacerbating the problems.

(k) Inter-Code Homonyms

The existence of identically spelled generic names correctly in current use for organisms treated under different Codes poses practical problems for information scientists searching databases on key words, and was not now only a matter for the taxonomist. For example, a microbiologist seeking information on the food colouring pigments produced by a species of the fungus genus *Monascus* v. Teighem 1884 would not necessarily wish to have data confused by literature or attributes relating to the trematode parasite of fish belonging to *Monascus* Looss 1907. This can be coped with by 'up-posting', as in the CAB-ABSTRACTS database where each taxon is assigned to a series of higher taxonomic levels, but to utilize such facilities to the full a searcher may need a higher level of training.

While this was not an issue that could be resolved for the names of the past, as it would involve a totally unacceptable number of changes, the problem could be contained from a date in the future. This issue could be resolved even in the absence of any general harmonization of the Codes, as it would be possible to have a parallel provision in all Codes requiring that newly coined generic names must not be homonyms of those existing under any Code. This will be a practical proposition before the turn of the century as by then there will be reasonably complete lists of validly published generic names, or at least those in current use, available in

CD-ROM or other electronic formats (see above). This provision could be considered for inclusion in the next editions of all Codes.

Acceptability to the users of the different Codes would depend very much both on the completeness and quality of the lists, and also their accessibility. It was noted that this could be done with a reasonable degree of confidence at the moment for those with access to the various hard-copy compilations already available.

It was also suggested that there could be difficulties with the enormous numbers of generic names to be coined for the yet undescribed 90% or more of the Earth's biota, if these names were not to become too long. Provision for homonyms to be permitted between specified groups where they were unlikely to be confused taxonomically could be proposed, but this would be complex in practice. For example, a paper dealing with the biology of a plant may also refer to the insects, nematodes, fungi and bacteria occurring on that same plant.

There could also be an advantage if all Codes, other than the Rules for viruses, rendered generic names ending in the suffix '*-virus*' inadmissible, so that this suffix was exclusive to viruses.

The Meeting appreciates the confusion that can be caused by the existence of homonyms in use under the different Codes, and recommends that (a) authors of new generic names avoid proposing a name established under another Code for a different taxon, and (b) provisions are introduced into each Code to disallow new generic names that are junior homonyms under any Code.

(l) Part- and Form-Taxon Nomenclature

Names based on parts or 'traces' of organisms, extant as well as fossil, are considered in various parts of the different Codes. There are problems in common ranging from vertebrate palaeontology to palynology and mycology, and it was agreed that some discussion of these issues should be held. Separated fossil parts, for example, have often been named independently from whole organisms and accommodated in separate hierarchical systems, a so-called 'parataxonomy'. Trace structures (ichnotaxa), for example fossilized footprints, have names, and there were even taxa based on 'works' of animals (such as a bite-hole in a leaf).

In the case of living taxa, some common problems exist, for example in the cases of pleomorphic fungi and algae and animals with complex life-cycles. The interface where taxa cross the fossil/living boundary could also be a cause of difficulties, for example in dinoflagellates. Under the Zoological Code, names compete on a priority basis whether Recent or fossil, or whether based on the whole organism or a part. However, under the Botanical Code, names based on Recent types have precedence over those based on a type which is a fossil.

These problems extend between kingdoms, and although the issues had been the subject of some inter-Code discussions in the 1950s and 1960s they have not been resolved. The problems remain and merit further exploration, and it would be valuable to hold an interdisciplinary meeting to see if there were sufficient common ground to develop a common procedure for palaeoparataxa.

There was some concern as to the use of the word 'parataxon' because of potential confusion with the now much more widely used word 'parataxonomist'. Parataxonomists, often local people, have basic taxonomic training to enable them to collect material for taxonomic study by others as a part of inventory studies (Janzen *et al.*,

1993). A term to be used instead of parataxa could perhaps be debated at the proposed meeting.

Another example, with many parallels, is the future nomenclature of uncultured bacteria and other microorganisms known only from nucleic acid sequences determined directly from environmental samples, and found to be very different from any recorded at present; the ICSB is currently considering this problem.

The Meeting recognizes the need to develop common procedures for the nomenclatural treatment of fossils, with particular emphasis on form genera and other parataxa, and to this end recommends IUBS in cooperation with international and national bodies such as the Systematics Association and Palaeontological Association, to organize a discussion meeting on this topic.

(m) Gender of Epithets

The employment of the rules of Latin grammar means that the termination of adjectival epithets will in the majority of cases change when a species is transferred from one genus to another whose name is of a different gender. This can be confusing as an epithet may not be quickly recognized as a familiar one after transfer, and altered spellings will cause problems in information retrieval. While the principle of Latin grammar is perhaps one of the longest traditions of biological nomenclature, if the purpose of a name is to communicate is there a *scientific* rather than a *linguistic* justification for this practice ? The gender of the name does not convey any biological information about the organism.

This issue merits further consideration by botanists in the light of the suggested provision in the discussion draft for the next Zoological Code that after 1996 generic names will have no gender. The original spellings of epithets would consequently not be changed on transfer from one genus to a new generic assignment (although existing combinations will remain as they are). Epithets such as *alba*, *albus*, and *album* in a genus would be treated as homonyms.

While the abandonment of gender might seem monstrous to one versed in Latin or other European languages with inflections, two-thirds of the world's people do not have a romance language as their native tongue, and even fewer know any Latin. As the names of organisms cater for an international audience the removal of gender considerations could be a major simplification for many users of names.

While it would be possible to indicate gender in compilations of generic names to help taxonomists without linguistic skills, and guidance on gender is available in the recent Zoological Codes and in Stearn (1992), this would not address the question of facilitating retrieval.

If the final version of the Zoological Code includes this change, the matter could perhaps be raised with botanists as a part of a package on harmonization, and the issue merits careful study with respect to any new harmonized biological Code.

4. Future Prospects

(a) Prospects and Principles for a Biological Code

The Meeting had received a challenging document from Dr F.C. Thompson, a member of the ICZN, on the possibilities for a Universal Biological Code. Such a

Code could be envisaged if it were to operate from a starting date in the future; that is, it would initially apply only to new names, and perhaps to certain new nomenclatural acts. It would be based on a registration system, building on existing and projected databases of names so that old names in use could be incorporated in due course.

There had been an attempt to produce a unified Code by Dall (1877), which was arranged in the form of single rules where the Codes were the same, and options as to procedures where they differed; i.e. it essentially combined the then current Codes into a single document and coped with the differences by means of special provisions to maintain current practices. This is paralleled by differences for particular groups such as algae and fungi embodied in the Botanical Code.

It was recognized by the Meeting that some difficulty could be experienced by users if different Codes had to be used for new as opposed to older names, especially as for some groups these extended back to 1753 or 1758. That might at least partly be overcome by having both within a single document.

The Meeting considered that harmonization should be seen not as a luxury but as a necessity. If biological nomenclature is to move towards a truly harmonized Code for the future, rather than to put the past into order through a common system, it would be necessary for biologists to step back from their specialist perspectives and reassess the purposes of Codes.

Agreement would be needed on the form of names, whether to keep a hierarchy, and whether types are to be insisted on as the only way to be sure of what is referred to. Rules such as those relating to priority were viewed as of a lesser order, in being designed to support the basic underlying ideas of the Codes. Some progress in the identification of common principles was made by Savory (1962), but there is now a need to extract the key elements and also to explain the role of the nomenclatural Codes. Points made at the Meeting which need to be embraced in any harmonized Code for the future are summarized in Table 2.

It would also be in the spirit of the IUBS Resolution passed in 1991 (see p. 192) for the existing Codes to start to embrace the issues raised at the Meeting for existing nomenclature as well as procedures to be adopted in the future.

Progress towards such a harmonized Code for the future would not be easy, especially for botanists for whom all changes require the consent of a 60% majority of the members of the Nomenclature Section of an International Botanical Congresses (IBCs), who must therefore be aware of the effects of proposed changes well ahead of the meeting. A harmonized Code is, however, a goal to be strived for in the interests of biology as a whole. One option would be to make a proposal for such a Code to the International Congress of Systematic and Evolutionary Biology (ICSEB) in 1996, ideally with a draft, which could then be considered also by the next IBC in 1999, the ICZN, and other relevant bodies.

The Meeting agrees that it would be highly advantageous to work towards a unified system of biological nomenclature, and notes that the XVI International Botanical Congress in Japan in 1993 established a Special Committee on Harmonizing Codes. The Meeting recognizes that while there are differences in procedures between the current Codes, which could not be reconciled for the nomenclature of the past without an unacceptable disruption of names in use, there is considerable scope for the harmonization which is to be actively pursued.

Table 2. *Points to be considered in the development of a harmonized approach to biological nomenclature.*

1. CODES REGULATE
   (a) Scientific names of taxa
   (b) Certain nomenclatural acts
2. CLASSIFICATION DETERMINES NOMENCLATURE
3. SCIENTIFIC NAMES
   (a) 'Latinized' (i.e. non-vernacular for easy recognition)
   (b) Fixed hierarchy
   (c) Species as the basic unit (epithet plus genus name)
   (d) Standardized endings of higher taxa
   (e) Labels not descriptors
4. NAMES SHOULD BE
   (a) Stable (*device*: priority)
   (b) Unrestricted (*device*: freedom to propose)
   (c) Necessary (*device*: stating differentiating characters)
   (d) Unambiguous (*device*: types)
   (e) Unique (*device*: homonyms disallowed)
5. PUBLICATION
   (a) In the scientific literature
   (b) With a description
   (c) With what they refer to
6. TYPES
   To define what a name refers to (not necessarily 'typical'); i.e. types are 'name-bearers'
7. NAME CHANGES
   To be strictly regulated

(b) Future Liaison and the Role of IUBS

The Meeting noted that there was an international need for a common approach to bionomenclature by regulatory authorities of various kinds, and that these were increasingly crossing traditional boundaries, for example in connection with the Convention on International Trade in Endangered Species (CITES) and 'Red Data Books'.

In order to make progress with the possibilities identified during the present Exploratory Meeting and to provide a mechanism for an on-going dialogue it was regarded as essential to establish an appropriate mechanism. IUBS has a Biotaxonomy and Bionomenclature Committee, but to date this had had a wider remit and not been concerned with nomenclatural issues. Further, this was a matter for IUMS as well as IUBS and an inter-union Commission was therefore required. This could appropriately be called the International Commission on Bionomenclature (ICB) and would benefit from representation of key user organizations.

The first task of the new Commission would be to receive the report of the Exploratory Meeting and where appropriate consider how to implement its findings. There would be an opportunity to report on progress to, and obtain feed-back from, a wider systematic community at the Fifth International Congress of Systematic and Evolutionary Biology (ICSEB V) in Budapest in 1996.

In addition, it was felt that IUBS could promote the inclusion of training in bionomenclature and increase the level of awareness amongst biologists as to its fundamental importance to all aspects of their discipline.

The Meeting recognizes the importance of continuing the dialogue started at, and implementing actions identified by, the Exploratory Meeting, recommends that an inter-union IUBS/IUMS International Commission on Bionomenclature (ICB) be established in 1994, and suggests that the new Commission includes a delegate representing each of the current five Codes, together with representatives from key user bodies (e.g. FAO, UNEP, IUCN, UNESCO, WHO).

The Meeting recommends that the organizers of the Fifth International Congress of Systematic and Evolutionary Biology (ICSEB V), to be held in Budapest in 1996, include a session to review progress towards harmonization and other aspects of bionomenclature.

5. Participants

Mr C.D. Brickell: Chair, International Commission for the Nomenclature of Cultivated Plants; Chair, ISHS Commission for Nomenclature and Registration. (U.K.).

Professor W.G. Chaloner: Past Chair, Committee for Fossil Plants; Editorial and General Committees of Botanical Nomenclature. (U.K.).

Professor J. Dodge: Department of Botany, Royal Holloway College, University of London. (U.K.).

Professor Dr W. Greuter: Rapporteur-général, Botanical Nomenclature; Chair Editorial and General Committees on Botanical Nomenclature; Secretary General, IAPT; IUBS Standing Committee on Biotaxonomy and Nomenclature. (Germany).

Professor D.L. Hawksworth (Meeting Chairman): Chair, International Commission on the Taxonomy of Fungi; General and Editorial Committees of Botanical Nomenclature; Chair, Special Committee on Harmonization between the Codes; IUBS Standing Committee on Biotaxonomy and Nomenclature. (U.K.).

Dr P.M. Kirk: Committee for Fungi. (U.K.).

Professor Dr O. Kraus: President, International Commission on Zoological Nomenclature. (Germany).

Dr J. Larsen: Department of Phycology and Mycology, University of Copenhagen. (Denmark).

Dr A.C. Leslie: International Commission for the Nomenclature of Cultivated Plants, ISHS Commission for Nomenclature and Registration; International Registrar for Cultivar Names, The Royal Horticultural Society. (U.K.).

Dr M.A. Mayo: International Committee on Taxonomy of Viruses; Chair, Plant Viruses Subcommittee. (U.K.).

Professor J. McNeill: Secretary, Editorial Committee of the International Code of Botanical Nomenclature; General Committee on Botanical Nomenclature; Committee for Spermatophyta; IUBS Executive Committee. (Canada).

Dr D.H. Nicolson: President, IAPT; Secretary of General Committee, and member Editorial Committee of the International Code of Botanical Nomenclature. (U.S.A.).

Dr I.W.B. Nye: Secretary-General, International Commission on Zoological Nomenclature. (U.K.).

Dr G. Saddler: International Society for Plant Pathology Subcommittee on Taxonomy of Phytopathogenic Bacteria. (U.K.).

Professor P.H.A. Sneath: Chair, Bergey's Manual Trust; Judicial Commission, International Committee on Systematic Bacteriology. (U.K.).

Professor Dr E. Stackebrandt: Secretary, International Committee on Systematic Bacteriology; Co-editor International Journal of Systematic Bacteriology. (Germany).

Mr R.P. Trehane: Editorial Committee, International Code of Botanical Nomenclature; Compiler Index Hortensis; International Commission on Nomenclature of Cultivated Plants. (U.K.).

Dr P.K. Tubbs: Executive Secretary, International Commission on Zoological Nomenclature; Editorial Committee, International Code of Zoological Nomenclature. (U.K.).

Dr T. Younès: Executive Director, International Union of Biological Sciences. (France).

6. Bibliography

Note: In addition to references cited in the text, this Bibliography also includes background papers distributed to participants before the meeting and others tabled or consulted in the course of its deliberations.

Anon. (Ed.). 1944. A discussion on the differences in observance between zoological and botanical nomenclature. *Proceedings of the Linnean Society of London*, **156**: 126–146.

Bock, W.J. 1994. (In press). History and nomenclature of avian family-group names. *Bulletin of the American Museum of Natural History*, no. 221.

Brickell, C.D., Voss, E.G., Kelly, A.F., Schneider, F. & Richens, R.H. (Eds.). 1980. *International Code of Nomenclature of Cultivated Plants*. (Regnum vegetabile No. 36). Bohn, Schlechtema & Holkema, Utrecht.

Brummitt, R.K. & Powell, C.E. 1992. *Authors of plant names*. Royal Botanic Gardens, Kew.

Brunt, A., Crabtree, K. & Gibbs, A. 1990. *Viruses of tropical plants*. CAB INTERNATIONAL, Wallingford.

Corliss, J.O. 1993. Should there be a separate code of nomenclature for the protists? *BioSystems*, **24**: 1–14.

Cornelius, P.F.S. 1987. Use versus priority in zoological nomenclature: a solution for an old problem. *Bulletin of Zoological Nomenclature*, **44**: 79–85.

Dall, W.H. 1877. Report of the Committee on Zoological Nomenclature to Section B of the American Association for the Advancement of Science, at the Nashville meeting, August 31, 1877. *American Association for the Advancement of Science*, **26**: 7–56.

Farr, E.R., Leeusink, J.A. & Stafleu, F.A. (Eds.). 1979. *Index Nominum Genericorum (Plantarum)*. 3 vols. (Regnum vegetabile Nos. 100–102) Bohn, Scheltema & Holkema, Utrecht.

Francki, R.I.B., Fauquet, C.M., Knudson, D.L. & Brown, F. 1990. Classification and nomenclature of viruses. *Archives of Virology*, **Supplement 2**: 1–445.

Greuter, W., Brummitt, R.K., Farr, E., Kilian, N., Kirk, P.M. & Silva, P.C. 1993. *NCU-3 Names in Current Use for Extant Plant Genera*. (Regnum vegetabile No. 129). Koeltz Scientific Books, Königstein.

Greuter, W., Barrie, F., Burdet, H.M., Chaloner, W.G., Demoulin, V., Hawksworth, D.L., Jorgensen, P.M., Nicolson, D.H., Silva, P.C., Trehane, P. & McNeill, J. (Eds.). 1994. *International Code of Botanical Nomenclature (Tokyo Code)*. (Regnum Vegetabile No. 131). Koeltz Scientific Books, Königstein.

Greuter, W., Hoogland, R.D., Reveal, J.L., Crosby, M.J., Grolle, R., Zijlstra, G. & David, J.C. 1993. *NCU-1 Family Names in Current Use for Vascular Plants, Bryophytes, and Fungi*. (Regnum Vegetabile No. 126). Koeltz Scientific Books, Königstein.

Greuter, W., McNeill, J. & Barrie, F.R. 1994. Report on botanical nomenclature — Yokohama 1993. *Englera*, **14**: 1–265.

Greuter, W. & Nicolson, D.H. 1993. On the threshold to a new nomenclature? *Taxon*, **42**: 925–927.

Greuter, W., Pitt, J.I., Samson, R.A., Ahti, T., Farjon, A. & Landolt, E. 1993. *NCU-2 Names in Current Use in the Families Trichocomaceae, Cladoniaceae, Pinaceae, and Lemnaceae*. (Regnum vegetabile No. 128). Koeltz Scientific Books, Königstein.

Hammond, P.M. 1992. Species inventory. Pp. 17–39 *in* Groombridge, B. (Ed.). *Global Biodiversity: Status of the Earth's Living Resources*. Chapman & Hall, London.

Hawksworth, D.L. (Ed.). 1991. *Improving the stability of names: needs and options*. (Regnum vegetabile No. 123). Koeltz Scientific Books, Königstein.

Hawksworth, D.L. 1992. The need for a more effective biological nomenclature for the 21st century. *Botanical Journal of the Linnean Society*, **109**: 543–567.

Hawksworth, D.L. 1993. Name changes for purely nomenclatural reasons are now avoidable. *Systema Ascomycetum*, **12**: 1–6.

Hawksworth, D.L. & Greuter, W. 1989. Improvement of stability in biological nomenclature. *Biology International*, **19**: 5–11.

Hawksworth, D.L. & Mound, L.A. 1991. Biodiversity databases: the crucial significance of collections. Pp. 17–29 *in* Hawksworth, D.L. (Ed.). *The biodiversity of microorganisms*

and invertebrates: its role in sustainable agriculture. CAB INTERNATIONAL, Wallingford.

Huang, L.H. (Ed.). 1991. *USFCC/ASM Symposium on Standardizing the Nomenclature, Vocabulary and Methodology of Microbiology, May 17, 1990 Anaheim, California*. (Advances in Culture Collections, vol. 1). United States Federation for Culture Collections, Groton.

International Commission on Zoological Nomenclature. 1985. *International Code of Zoological Nomenclature*, Ed. 3. International Trust for Zoological Nomenclature, London.

Janzen, D.H., Hallwachs, W., Jiminez, J. & Gámez, R. 1993. The role of the parataxonomists, inventory managers, and taxonomists in Costa Rica's National Biodiversity Inventory. Pp. 223–254 in Reid, W. *et al.* (Eds.). *Biodiversity prospecting: using genetic resources for sustainable development*. World Resources Institute, U.S.A.

Jarvis, C.E, Barrie, F.R., Allan, D.M. & Reveal, J.L. 1993. *A list of Linnaean generic names and their types*. (Regnum vegetabile No. 127). Koeltz Scientific Books, Königstein.

Jeffrey, C. 1973. *Biological nomenclature*. Edward Arnold, London.

Jeffrey, C. 1989. *Biological nomenclature*, Ed. 3. Edward Arnold, London.

Korf, R.P. 1983. Sanctioned epithets, sanctioned names, and cardinal principles in ':Pers.' and ':Fr.' citations. *Mycotaxon*, **16**: 341–352.

Larsen, J. 1987. Algal studies of the Danish Wadden Sea. IV. A taxonomic study of the interstitial euglenoid flagellates. *Nordic Journal of Botany*, **7**: 589–607.

Meregalli, M. 1993. A note on infraspecific terminology in the *Cactaceae*. *International Organization for Succulents Bulletin*, **5**: 214–216.

McNeill, J. & Greuter, W. 1986. Botanical nomenclature. Pp. 3–25 *in* Ride, W.D.L. & Younès (Eds.). *Biological nomenclature today*. (IUBS Monograph Series, no. 2). IRL Press, Eynsham.

Mayo, M.A. 1994. (In press). Modifications to the rules for virus nomenclature. *Archives of Virology*.

Neave, S.A. *et al.* 1939–1993. *Nomenclator Zoologicus*. 8 vols. Zoological Society of London, London.

Nicolson, D.H. 1991. A history of botanical nomenclature. *Annals of the Missouri Botanical Garden*, **78**: 33–56.

Nicolson, D.H. & Greuter, W. 1994. Guidelines for proposals to conserve or reject names. *Taxon*, **43**: 109–112.

Patterson, D.J. & Larsen, J. 1991. *Nomenclatural problems with protists*. Pp. 197–208 *in* Hawksworth, D.L. (Ed.). Improving the stability of names: needs and options. (Regnum vegetabile No. 123). Koeltz Scientific Books, Königstein.

Patterson, D.J. & Larsen, J. 1992. A perspective on protistan nomenclature. *Journal of Protozoology*, **39**: 125–131.

Reynolds, D.R. & Taylor, J.W. 1991. DNA specimens and the 'International Code of Botanical Nomenclature'. *Taxon*, **40**: 311–315.

Ride, W.D.L. 1988. Towards a unified system of biological nomenclature. Pp. 332–353 *in* Hawksworth, D.L. (Ed.). *Prospects in systematics*. Clarendon Press, Oxford.

Ride, W.D.L. 1991. Justice for the living: a review of bacteriological and zoological initiatives in nomenclature. Pp. 105–122 *in* Hawksworth, D.L. (Ed.). *Improving the stability of names: needs and options*. (Regnum vegetabile No. 123). Koeltz Scientific Books, Königstein.

Ride, W.D.L. & Younès, T. (Eds.). 1986. *Biological nomenclature today*. (IUBS Monograph Series, no. 2). IRL Press, Eynsham.

Rollins, R.C. (Ed.). 1959. Symposium on Linnaeus and nomenclatural codes. *Systematic Zoology*, **8**: 1–45.

Savory, T. 1962. *Naming the living world*. English Universities Press, London.

Sherborn, C.D. 1902–1933. *Index Animalium*. 11 vols. British Museum, London.

Skerman, V.D.B., McGowan, V. & Sneath, P.H.A. 1989. *Approved Lists of Bacterial Names*. Amended edition. American Society for Microbiology, Washington, D.C.

Sneath, P.H.A. 1986. Nomenclature of bacteria. Pp. 36–48 *in* Ride, W.D.L. & Younès, T. (Eds.). *Biological nomenclature today*. (IUBS Monograph Series No. 2). IRL Press, Eynsham.

Sneath, P.H.A. 1989. Bacterial nomenclature. Pp. 19–23 *in* Krieg, N.R. & Holt, J.G. (Eds.). *Bergey's Manual of Systematic Bacteriology*, vol. 1. Williams & Wilkins, Baltimore.

Sneath, P.H.A. (Ed.). 1992. *International Code of Nomenclature of Bacteria*, 1990 Revision. American Society for Microbiology, Washington, D.C.

Stearn, W.T. 1986. Historical survey of the naming of cultivated plants. *Acta Horticulturae*, **182**: 19–28.

Stearn, W.T. 1992. *Botanical Latin*, Ed. 4. David & Charles, Newton Abbot.

Styles, B. (Ed.). 1986. *Infraspecific classification of wild and cultivated plants*. Clarendon Press, Oxford.

Systematics Agenda 2000. 1994. *Systematics Agenda 2000. Charting the Biosphere. Technical report*. Systematics Agenda 2000, New York.

Taylor, F.J.R., Sarjeant, W.A.S., Fensome, R.A. & Williams, G.L. 1987. Standardization of nomenclature in flagellate groups treated by both the Botanical and Zoological Codes of Nomenclature. *Systematic Zoology*, **36**: 79–85.

Trehane, P. (Ed.). 1993. The Horticultural Taxonomy Group. *Hortax News*, **1**: 1–3.

Weresub, L.K. 1970. Automatic tautonyms: zoological vs. botanical Code. *Taxon*, **19**: 787–788.

Weresub, L.K. 1979. Mycological nomenclature: reflections on its future in the light of its past. *Beihefte zur Sydowia*, **8**: 416–431.

Wildy, P. 1971. *Classification and nomenclature of viruses*. (Monographs in Virology, no. 5). Karger, Basel.

Young, J.M., Bradbury, J.F., Davis, R.E., Dickey, R.S., Ercolani, G.L., Hayward, A.C. & Vidaver, A.K. 1991. Nomenclatural revisions of plant pathogenic bacteria and list of names 1980–1988. *Review of Plant Pathology*, **70**: 213–221.

Younès, T. (Ed.). 1992. *Promoting life sciences for a better human life*. International Union of Biological Sciences, Paris.

7. Abbreviations and Acronyms

CABI	=	CAB INTERNATIONAL
CITES	=	Convention on International Trade in Endangered Species of Wild Fauna and Flora
FAO	=	Food and Agriculture Organization of the United Nations
GC	=	General Committee on Botanical Nomenclature
IAPT	=	International Association for Plant Taxonomy
IBC	=	International Botanical Congress
ICB	=	International Commission on Bionomenclature
ICNCP	=	International Commission for the Nomenclature of Cultivated Plants
ICSB	=	International Committee on Systematic Bacteriology
ICSEB	=	International Congress of Systematic and Evolutionary Biology
ICTV	=	International Committee on the Taxonomy of Viruses
ICZN	=	International Commission on Zoological Nomenclature
IJSB	=	International Journal of Systematic Bacteriology
IRA	=	International Registration Authority
ISHS	=	International Society for Horticultural Science
IUBS	=	International Union of Biological Sciences
IUCN	=	IUCN — The World Conservation Union
IUMS	=	International Union of Microbiological Societies
NCU	=	Names in Current Use
UNEP	=	United Nations Environment Programme
UNESCO	=	United Nations Educational, Scientific and Cultural Organization
VIDE	=	Virus Identification Data Exchange
WHO	=	World Health Organization

Case 2904

Nesopupa Pilsbry, 1900 (Mollusca, Gastropoda): proposed conservation

Robert H. Cowie, Carl C. Christensen & Neal L. Evenhuis
Bishop Museum, P.O. Box 19000A, Honolulu, Hawaii 96817–0916, U.S.A.

Abstract. The purpose of this application is the conservation of the name *Nesopupa* Pilsbry, 1900 for a genus of land snails by the suppression of *Ptychochilus* Boettger, 1881, an unused senior objective synonym.

---

1. *Ptychochilus* was proposed by Boettger (1881, p. 47) as the name of a subsection of the section *Vertigo* Müller, 1774 (in the genus '*Pupa* Drap.') for a group of Pacific island land snail species. There are two alternative original spellings of Boettger's name: *Ptychochilus* (p. 47) and *Ptychochylus* (p. 48). The type species of *Ptychochilus* is *Pupa tantilla* Gould, 1847 (p. 197) by original designation. The taxonomic group concerned is currently treated as a genus in either the PUPILLIDAE (e.g. Smith, 1992, p. 287) or the VERTIGINIDAE (e.g. Vaught, 1989, p. 80) and is one of the most widespread genera of terrestrial Mollusca. Species are most numerous in the islands of the Indo-Pacific region (especially the Hawaiian Islands), but occur also, for example, in India, Southeast Asia, Australasia and the islands of the Indian Ocean; the genus has also been recorded from Africa and St. Helena and from the Galapagos Islands.

2. Pilsbry (1900, p. 431) introduced the name *Nesopupa* implicitly as a replacement name for *Ptychochilus* Boettger, 1881, considering the latter name preoccupied by *Ptychocheilus* Agassiz, 1855 (p. 227) (Osteichthyes). The name *Ptychochilus* of Gill (1865, p. 70) and Jordan (1877, p. 58) is an incorrect subsequent spelling of *Ptychocheilus* Agassiz, 1855 (see also Eschmeyer, 1990, p. 348) and is unavailable. Pilsbry's action was valid at the time but, under Article 56(b) of the modern Code, 'even if the difference between two genus-group names is only one letter, these two names are not homonyms'. *Ptychochilus* Boettger, 1881 is thus not a junior homonym of *Ptychocheilus* Agassiz, 1855 and is available as a senior objective synonym of *Nesopupa* Pilsbry, 1900.

3. Acceptance of the priority of *Ptychochilus* Boettger, 1881 (or its alternative original spelling *Ptychochylus*) over *Nesopupa* Pilsbry, 1900 would overturn accustomed usage. Neither *Ptychochilus* Boettger nor its alternative spelling appears to have been used as the valid name of this taxon since the proposal of *Nesopupa* by Pilsbry in 1900. *Nesopupa*, on the other hand, has been and continues to be used extensively, e.g. Abbott (1989, p. 213), Chambers (1991, pp. 309, 317, 318), Smith (1992, p. 292). A listing of 15 representative references during the past 70 years is held by the Secretariat. The family-group name NESOPUPINAE Steenberg, 1925 (p. 201) is based on *Nesopupa* and is also generally accepted, e.g. Pilsbry (1948, pp. 870, 1006), Zilch (1959, p. 149), Vaught (1989, p. 80). Acceptance of the priority of Boettger's names over *Nesopupa* would introduce unnecessary confusion into the nomenclature of a widely known and clearly understood genus and of a well-established subfamily.

4. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the following generic names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
   (a) *Ptychochilus* Boettger, 1881;
   (b) *Ptychochylus* Boettger, 1881 (alternate original spelling of *Ptychochilus*);

(2) to place on the Official List of Generic Names in Zoology the name *Nesopupa* Pilsbry, 1900 (gender: feminine), type species by original designation of the replaced nominal genus *Ptychochilus* Boettger, 1881 *Pupa tantilla* Gould, 1847;

(3) to place on the Official List of Specific Names in Zoology the name *tantilla* Gould, 1847, as published in the binomen *Pupa tantilla* (specific name of the type species of *Nesopupa* Pilsbry, 1900);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
   (a) *Ptychochilus* Boettger, 1881, as suppressed in (1)(a) above;
   (b) *Ptychochylus* Boettger, 1881, as suppressed in (1)(b) above.

References

Abbott, R.T. 1989. *Compendium of landshells*. 240 pp. American Malacologists Inc., Melbourne, Florida.

Agassiz, L. 1855. Synopsis of the ichthyological fauna of the Pacific slope of North America, chiefly from the collections made by the U.S. Expl. Exped. under the command of Captain C. Wilkes, with recent additions and comparisons with eastern types. *American Journal of Science and Arts*, (2)**19**(56): 215–231.

Boettger, O. 1881. Die *Pupa*-Arten Oceaniens. *Conchologische Mittheilungen*, **1**(4): 45–72.

Chambers, S.M. 1991. Biogeography of Galapagos land snails. Pp. 307–325 *in* James, M.J. (Ed.), *Galapagos marine invertebrates*. Plenum, New York.

Eschmeyer, W.N. 1990. *Catalog of the genera of Recent fishes*. 697 pp. California Academy of Sciences, San Francisco.

Gill, T. 1865. Note on several genera of cyprinoids. *Proceedings of the Academy of Natural Sciences of Philadelphia*, **1865**: 69–70.

Gould, A.A. 1847. [Dr. Gould gave descriptions of the following species of *Partula*, *Pupa*, and *Balea*, collected by the Exploring Expedition]. *Proceedings of the Boston Society of Natural History*, **2**: 196–198.

Jordan, D.S. 1877. Contributions to North American ichthyology, No. 2. *Bulletin of the United States National Museum*, **10**: 1–120.

Pilsbry, H.A. 1900. Note on Polynesian and East Indian Pupidae. *Proceedings of the Academy of Natural Sciences of Philadelphia*, **52**: 431–433.

Pilsbry, H.A. 1948. Land Mollusca of North America (North of Mexico). Volume 2, part 2. *Monographs of the Academy of Natural Sciences of Philadelphia*, **3**: 521–1113.

Smith, B.J. 1992. Non-marine Mollusca. Pp. 1–399 *in* Houston, W.W.K. (Ed.), *Zoological Catalogue of Australia*, vol. 8. Australian Government Publishing Service, Canberra.

Steenberg, C.M. 1925. Études sur l'anatomie et la systématique des maillots (Fam. Pupillidae s. lat.). *Videnskabelige Meddelelser fra Dansk naturhistorisk Forening*, **80**: 1–211.

Vaught, K.C. 1989. *A classification of the living Mollusca*. xii, 195 pp. American Malacologists Inc., Melbourne, Florida.

Zilch, A. 1959. Gastropoda, Euthyneura. *In* Schindewolf, O.H. (Ed.), *Handbuch der Paläozoologie*, vol. 6, Teil 2, Lieferung 1. Pp. 1–200. Borntraeger, Berlin.

Case 2902

Acanthoteuthis Wagner in Münster, 1839 and *Kelaeno* Münster, 1842 (Mollusca, Cephalopoda): proposed conservation of usage

D.T. Donovan

Department of Geological Sciences, University College London, Gower Street, London WC1E 6BT, U.K.

Abstract. The purpose of this application is to conserve the current usage of the names *Acanthoteuthis* Wagner in Münster, 1839 and *Kelaeno* Münster, 1842 for two genera of Jurassic teuthoid coleoids. In 1839 Münster had mentioned the name *Kelaeno* as synonymous with *Acanthoteuthis* but had not made it available. In 1841 d'Orbigny used the name *Kelaeno* in Münster's (1839) sense, but in 1842 Münster used the name for a different taxon which conforms with current usage. Suppression of *Kelaeno* d'Orbigny, 1841 is proposed.

---

1. The generic name *Acanthoteuthis* was proposed for certain fossils from the Upper Jurassic (Tithonian Stage) lithographic limestones (lithographischen Schiefern) of the Solnhofen area of Bavaria in a letter from Rudolf Wagner quoted by Georg Graf zu Münster (1839, p. 94). After describing the fossils Wagner wrote 'Was endlich den Namen betrifft, so könnte man die fossile Gattung vielleicht *Acanthopus*, oder, um gleich die Familie und die Verwandtschaft mit *Onychoteuthis* anzudeuten, *Acanthoteuthis* nennen.' (Lastly, as far as the name is concerned, one may perhaps call the fossil genus *Acanthopus*, or, so as to indicate the family and the relationship with *Onychoteuthis*, *Acanthoteuthis*). After quoting Wagner's letter Münster wrote: 'Ich finde den vorgeschlagenen Namen *Acanthoteuthis* passend und vertausche ihn gern mit dem früher vorgeschlagenen Namen *Kelaeno* (Harpie) ...'. (I find the proposed name *Acanthoteuthis* appropriate and exchange it willingly with the earlier proposed name *Kelaeno* (Harpy) ...). Notwithstanding the phrase 'dem früher vorgeschlagenen Namen' the name *Kelaeno* had not been previously published. Thus Münster's (1839) paper mentions three new names for the same genus: *Acanthopus*, *Acanthoteuthis* and *Kelaeno*. Of these Münster selected *Acanthoteuthis* as the available name. The other two names were not made available since they were not used as valid names. Wagner (in Münster, 1839) did not cite any species, but Münster in his accompanying text described and figured three species: *Acanthoteuthis speciosa* (p. 94, pl. 9), *A. Férussacii* (p. 95, pl. 10, fig. 1) and *A. Lichtensteinii* (p. 96, pl. 10, fig. 2). The first two specific names had been previously published as the nomina nuda *Onychoteuthis speciosa* and *O. Ferussacci* by Münster (1837, p. 252).

2. Münster had sent MS descriptions and figures of what he then called *Kelaeno speciosa* and other species to d'Orbigny, who (1841, p. 354) published the combinations *Kelaeno speciosa* (Münster, 1839) and *Kelaeno prisca* (Rüppell, 1829) in a list. Since *Kelaeno* had not been made available in Münster (1839), d'Orbigny's inclusion of two available specific names makes this the first valid publication of *Kelaeno*. D'Orbigny later (1843, p. 140, pl. 23, figs. 1–4) published a description and figures of

Kelaeno speciosa, to Münster's displeasure (1846, p. 54) because by then Münster had accepted *Acanthoteuthis* for this taxon and (1842a, p. 46) had used *Kelaeno* in a different sense for a new genus of cephalopod from the lithographischen Schiefern, giving a diagnosis but citing no species. Later the same year Münster (1842b) described and figured two species, *Kelaeno scutellaris* (p. 96, pl. 1, fig. 1) and *Kelaeno arquata* (p. 96, pl. 1, fig. 2). In the same paper Münster (p. 97) described a species of *Acanthoteuthis*. It is clear from this and from the descriptions and figures that Münster was not using *Kelaeno* for the same taxon as *Acanthoteuthis* but for a different and new genus. Quenstedt (1849, p. 522) noted that Münster had used *Kelaeno* in two different senses, and adopted the sense of Münster (1842).

3. Owen (1844, p. 81) referred to d'Orbigny (1843) and used the spelling *Celaeno*, but did not explain the change of spelling from *Kelaeno* to *Celaeno*. A.J. Wagner (1860, p. 779) likewise used the spelling *Celaeno* and explained that this was a correction to the latinization of 'Kelaeno', a mythical Greek 'Harpy'. Fischer (1882, p. 354) also used the spelling *Celaeno*, with *Kelaeno* as a synonym, but in the sense of Münster (1842). The form *Celaeno* had been used before 1844 for different taxa by at least three different authors: Rafinesque-Schmalz (1815), Leach (1821) and Koch (1835). *Celaeno* Owen is an unjustified emendation and a junior homonym and cannot be used as a valid name.

4. In his *Manual of the Mollusca*, Woodward (1851, p. 75) adopted *Acanthoteuthis*, with *Kelaeno* (sensu Münster, 1839) as a synonym. Schenk (1884, pp. 519, 521) in Zittel's *Handbuch der Palaeontologie* adopted both *Acanthoteuthis* and *Kelaeno* (sensu Münster, 1842).

5. Bülow-Trummer (1920, p. 268) designated *Acanthoteuthis speciosa* Münster, 1839 as the type species of *Acanthoteuthis*. Bülow-Trummer also (1920, p. 266) listed *Celaeno* Münster, 1842 with the type species *Celaeno arcuata* Münster; this is accepted as a type species designation for *Kelaeno* of *Kelaeno arquata* Münster, 1842, which Bülow-Trummer spelt as *arcuata* in his synonymy.

6. Naef, an authority on both living and fossil Coleoidea, in two works published in 1921 accepted *Kelaeno* Münster, 1842 and proposed a family KELAENIDAE, indicating this as nom. nov. in both papers (1921a, p. 535; 1921b, p. 47). Naef (1921a) was published on 31 March 1921; Naef (1921b) is not dated and is presumed to have been published later since in his bibliography Naef (1922) placed it after Naef (1921a). It follows that KELAENIDAE was established in Naef (1921a). In a comprehensive work on fossil Coleoidea, extensively cited by later authors, Naef (1922, p. 150) spelt the names *Celaeno* and CELAENIDAE without explaining the change of spelling.

7. Schevill (1950) regarded *Kelaeno* Münster, 1842 as preoccupied by *Kelaeno* Münster, 1839 and therefore unavailable. He proposed as a substitute *Münsterella* with the type species *Kelaeno scutellaris* Münster, 1842. This name is to be corrected to *Muensterella* under Article 32d(i)2 of the Code.

8. Roger (1952, p. 742) in a treatise on invertebrate palaeontology adopted *Münsterella* in place of *Kelaeno* and the family-group name MÜNSTERELLIDAE in place of KELAENIDAE Naef, 1921. He was followed in this generic usage in a Russian treatise (Krimholz, 1958, p. 171) which cited *Kalaeno* [sic — a lapsus calami] Münster, 1842 as a synonym, but retained the family group name CELAENIDAE Naef, 1921 with MÜNSTERELLIDAE Roger, 1952 as a synonym.

9. Jeletzky, an authority on fossil Coleoidea, in a preliminary study for the *Treatise on Invertebrate Paleontology*, included *Acanthoteuthis* as a valid genus (1966, p. 138) and listed the following (1966, p. 45) without comment: 'Kelaenidae Jeletzky, herein [nom. subst. pro Celaenidae Naef, 1921 (invalid family-group name based on nom. van., Code, Art. 11e)], containing *Kelaeno* Münster, 1842 (non Münster, 1839) [= *Celaeno* Naef, 1921; *Muensterella* Schevill, 1950 (ICZN pend.)]'. Jeletzky wrongly cited Naef's 1921 paper as using the incorrect spellings CELAENIDAE and *Celaeno*. Jeletzky did not submit an application to the Commission to determine the matter, and accordingly Engeser (1988) accepted *Kelaeno* d'Orbigny, 1841 as valid and employed *Muensterella* and MUENSTERELLIDAE to replace *Kelaeno* Münster, 1842 and KELAENIDAE Naef, 1921.

10. *Acanthoteuthis* Wagner, 1839 has been widely used and always in the original sense. However, this name is at risk from the minority of workers who have considered that *Kelaeno* Münster, 1839 (or the unjustified emendation *Celaeno*) is the correct name for this taxon. *Acanthopus* has been generally ignored although Münster (1846, p. 59) proposed its use as a subgenus of *Acanthoteuthis*. Naef (1922, p. 115, footnote) noted *Acanthopus* but did not use it in his main text. The name had been used prior to 1839 by Klug (1807), Dahl (1823), Latreille (1829) and de Haan (1835) and was placed on the Official Index as a junior homonym in Direction 37 (1956).

11. There is confusion with *Kelaeno* because of the ambiguous nature of Münster's (1839) use of this name and its publication by d'Orbigny (1841) which had been overlooked by most authors. It was generally used by 19th century German palaeontologists with the meaning of Münster (1842), e.g. (as *Celaeno*) by A.J. Wagner (1860, p. 779) in a critical review of the Coleoidea of the lithographischen Schiefern. A few authors have regarded it as preoccupied by *Kelaeno* Münster, 1839, and three (Roger, 1952; Krimholz, 1958; Engeser, 1988) to my knowledge have employed the substitute name *Muensterella*. It is important to stabilise usage of the names *Acanthoteuthis* Wagner, 1839 and *Kelaeno* Münster, 1842 in their generally accepted usage.

12. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the generic name *Kelaeno* d'Orbigny, 1841, and all uses of the name *Kelaeno* prior to the publication of *Kelaeno* Münster, 1842, for the purposes of both the Principle of Priority and the Principle of Homonymy;

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Acanthoteuthis* Wagner in Münster, 1839 (gender: feminine), type species by subsequent designation by Bülow-Trummer (1920) *Acanthoteuthis speciosa* Münster, 1839;
   (b) *Kelaeno* Münster, 1842 (gender: feminine), type species by subsequent designation by Bülow-Trummer (1920) *Kelaeno arquata* Münster, 1842;

(3) to place on the Official List of Specific Names in Zoology the following names:
   (a) *speciosa* Münster, 1839, as published in the binomen *Acanthoteuthis speciosa* (specific name of the type species of *Acanthoteuthis* Wagner in Münster, 1839);
   (b) *arquata* Münster, 1842, as published in the binomen *Kelaeno arquata* (specific name of the type species of *Kelaeno* Münster, 1842);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
  (a) *Kelaeno* Münster, 1839 (nomen nudum);
  (b) *Kelaeno* d'Orbigny, 1841, as suppressed in (1) above;
  (c) *Celaeno* Owen, 1844 (incorrect subsequent spelling of *Kelaeno* Münster, 1842);
  (d) *Kalaeno* Krimholz, 1958 (incorrect subsequent spelling of *Kelaeno* Münster, 1842).

References

Bülow-Trummer, E. von. 1920. Cephalopoda dibranchiata. *Fossilium Catalogus, 1: Animalia*, part 11. 313 pp. Junk, Berlin.

Engeser, T. 1988. Vampyromorpha ('Fossile Teuthiden'). *Fossilium Catalogus, 1: Animalia*, part 130. 167 pp. Kugler, Amsterdam.

Fischer, P. 1882. *Manuel de conchyliologie et de paléontologie conchyliologique ou histoire naturelle des mollusques vivants et fossiles*, part 4. Pp. 305–416. Savy, Paris.

Jeletzky, J.A. 1966. Comparative morphology, phylogeny, and classification of fossil Coleoidea. *University of Kansas Paleontological Contributions*, Mollusca Article 7: 1–162.

Krimholz, G.Y. 1958. Pp. 145–178 *in* Luppov, N.P. & Drushchitz, V.V. (Eds.), *Endocochlia in Osnovy Paleontologii: Molluscs — II.* Moscow.

Münster, G. Graf zu. 1837. Neue Gattungen und Arten fossiler Körper. P. 252 *in* Mineralogische Vorträge bei der Versammlung Deutscher Naturforscher und Ärzte in Jena im Sept. 1836. *Neues Jahrbuch für Mineralogie, Geognosie, Geologie und Petrefakten-Kunde*, **1837**: 244–252.

Münster, G. Graf zu. 1839. *Acanthoteuthis*, ein neues Geschlecht der Cephalopoden, zu der Familie der Loligineen oder Teuthidae (Owen) gehörend. Pp. 91–97 *in* Münster, G. Graf zu (Ed.), *Beiträge zur Petrefacten-Kunde*, part 1. Bayreuth.

Münster, G. Graf zu. 1842a. Beitrag zur Kenntniss einiger neuen seltenen Versteinerungen aus den lithographischen Schiefern in Baiern. *Neues Jahrbuch für Mineralogie, Geognosie, Geologie und Petrefakten-Kunde*, **1842**: 35–46.

Münster, G. Graf zu. 1842b. Ueber einige neue fossile schalenlose Cephalopoden und eine neue Gattung Ringelwürmer (Anneliden). Pp. 95–99 *in* Münster, G. Graf zu (Ed.), *Beiträge zur Petrefacten-Kunde*, part 5. Bayreuth.

Münster, G. Graf zu. 1846. Ueber die schalenlosen Cephalopoden des oberen Juragebirgs, der lithographischen Kalkschiefer in Bayern. Pp. 51–66 *in* Dunker, W. (Ed.), *Beiträge zur Petrefacten-Kunde*, part 7. Bayreuth.

Naef, A. 1921a. Das System der dibranchiaten Cephalopoden und die mediterranen Arten derselben. *Mitteilungen aus der Zoologischen Station zu Neapel*, **22**: 527–542.

Naef, A. 1921b. *Die Cephalopoden. 35 Monographie der Fauna und Flora des Golfes von Neapel und der angrenzenden Meeres-Abschnitte*, part 1. 147 pp. Friedländer, Berlin.

Naef, A. 1922. *Die fossilen Tintenfische*. vii, 322 pp. Fischer, Jena.

Orbigny, A. d'. 1841. Considérations paléontologiques et géographiques sur la distribution des céphalopodes acétabulifères. *Bulletin de la Société Géologique de France*, **12**: 352–364.

Orbigny, A. d'. 1843. *Paléontologie française. Description zoologique et géologique de tous les animaux mollusques et rayonnés fossiles de France, comprenant leur application à la reconnaissance des couches. Terrains oolitiques ou jurassiques. Tome premier, comprenant les céphalopodes*, parts 6–11. Pp. 81–144, pls. 6–44. Author, Paris.

Owen, R. 1844. A description of certain belemnites, preserved, with a great portion of their soft parts, in the Oxford Clay, at Christian-Malford, Wilts. *Philosophical Transactions of the Royal Society*, **1844**: 65–83.

Quenstedt, F.A. 1849. Pp. 473–580, pls. 31–36 *in*: *Petrefactenkunde Deutschlands. 1. Die Cephalopoden*, part 6. Fues, Tübingen.

Roger, J. 1952. Sous-classe des Dibranchiata Owen 1836. Pp. 689–755 *in* Piveteau, J. (Ed.), *Traité de Paléontologie*, vol. 2. Masson, Paris.

Schenk, A. 1884. Pp. 329–522 *in* Zittel, K.A. (Ed.), *Handbuch der Palaeontologie*, vol. 1, part 3 (Palaeozoologie) 2 (Mollusca und Arthropoda). Oldenbourg, München & Leipzig.

Schevill, W.E. 1950. *Münsterella*, a new name for *Kelaeno* Münster 1842, non Münster 1839. *Journal of Paleontology*, **24**: 117–118.

Wagner, A.[J.] 1860. Die fossilen Ueberreste von nackten Dintenfischen aus dem lithographischen Schiefer und dem Lias des süddeutschen Juragebirges. Kritisch erläutert. *Abhandlungen der Mathemat.-Physikalischen Classe der königlich bayerischen Akademie der Wissenschaften*, **8**(3): 751–821.

Woodward, S.P. 1851. *A manual of the Mollusca; or, rudimentary treatise of Recent and fossil shells*, part 1. viii, 158 pp., 12 pls. Weale, London.

Case 2915

Lironeca Leach, 1818 (Crustacea, Isopoda): proposed conservation as the correct original spelling

Ernest H. Williams, Jr.

Caribbean Aquatic Animal Health Project, Department of Marine Sciences, University of Puerto Rico, P.O. Box 908, Lajas, Puerto Rico 00667

Thomas E. Bowman

Department of Invertebrate Zoology, National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20560, U.S.A.

Abstract. The purpose of this application is to conserve *Lironeca* Leach, 1818 as the correct original spelling of a genus of isopods which are parasites in the gill chambers of New World fishes. The name originally appeared as *Livoneca* due to a printer's error. Both *Lironeca* and *Livoneca* have been in use over the years but *Lironeca* has been more common in recent times.

---

1. Leach (1818, p. 351) in his article on the isopod family 'CYMOTHOADÉES, Cymothoadae' proposed a series of new generic names formed from anagrams of 'Caroline' and 'Carolina', viz. *Nelocira*, *Cirolana*, *Conilera*, *Rocinela*, *Canolira*, *Anilocra*, *Olencira* and *Nerocila*. Another generic name evidently intended to be an anagram of 'Caroline' was, through a printer's error, misspelled *Livoneca* (type species *L. redmanii* Leach, 1818 by subsequent designation by Gurjanova, 1936, p. 66). That these names were based on anagrams is a fact conceded even by those who argue that the genus must be spelled *Livoneca* because Article 32(c)(ii) of the Code requires that clear evidence of printer's error must be present 'in the original publication itself, without recourse to any external source of information'.

2. Supporters of *Livoneca* (e.g. Sivertsen & Holthuis, 1980, p. 36) maintain that there is no internal evidence in Leach's text that generic names were based on anagrams of Caroline and Carolina, since Leach did not specify the origin of his names.

3. We maintain that it is patently obvious from their constructions themselves that Leach formed five names as anagrams of Caroline and three names as anagrams of Carolina. This constitutes evidence 'in the original publication itself' and further evidence in the form of an explicit statement by Leach is not required. The handwritten 'r' and 'v' can be very similar and easily confused by a printer. The possibility must be infinitesimal that Leach based eight names on anagrams and deliberately formed another name that failed to be an anagram by a single easily mistaken letter. The argument in support of this possibility is the kind of pedantic legalism that exposes taxonomists to ridicule by other biologists.

4. In any case, unequivocal evidence for a printer's error, unfortunately not admissible under Article 32(c)(ii), is the discovery by Monod (1931, p. 5, footnote 2) that on the reprint sent to Latreille, Leach corrected the names Livonèce and

Livoneca to Lironèce and *Lironeca* every time that they occurred (eight times). There are other incorrect original spellings in Leach's paper: Recinèle (latinized as *Rocinela*), *Anilacre* (elswhere spelt *Anilocra*), *Desmaretii* (for *Desmarestii*).

5. We have reviewed the literature in our data base (Bowman et al., in preparation) for the use of the *Lironeca* and *Livoneca* spellings in the last 50 years and over the period as a whole *Lironeca* predominates. The spelling *Livoneca* dominated from 1941 to 1960 (27 vs. 7), the two spellings were equally used from 1961 to 1970 (17 vs. 18) but *Lironeca* dominates in the more recent (1971–1990) literature (104 vs. 14) e.g. Williams & Bunkley-Williams, 1994; Bunkley-Williams & Williams, 1987; Bowman & Tareen, 1983. It would therefore be contrary to stability to 'revert' to *Livoneca*.

6. Although White (1847) was the first author to use the name *Lironeca* in print, he should not be considered the author of this name. White (1847, p. 109) gave Leach as the author of the genus *Lironeca*.

7. The subfamily name LIVONECINAE Schioedte & Meinert, 1884 (p. 325) is therefore also based on an incorrect original spelling and we consider that it should be corrected to LIRONECINAE Schioedte & Meinert, 1884 under Article 32c(iii) of the Code.

8. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to rule that *Livoneca* is an incorrect original spelling of *Lironeca* Leach, 1818;

(2) to place on the Official List of Generic Names in Zoology the name *Lironeca* Leach, 1818 (gender: feminine) (spelling corrected in (1) above), type species by subsequent designation by Gurjanova (1936) *Livoneca redmanii* Leach, 1818;

(3) to place on the Official List of Specific Names in Zoology the name *redmanii* Leach, 1818, as published in the binomen *Livoneca* [sic] *redmanii* (specific name of the type species of *Lironeca* Leach, 1818);

(4) to place on the Official List of Family-Group Names in Zoology the name LIRONECINAE Schioedte & Meinert, 1884 (type genus *Lironeca* Leach, 1818) (correction of LIVONECINAE);

(5) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Livoneca* Leach, 1818 (ruled in (1) above to be an incorrect original spelling of *Lironeca* Leach, 1818);

(6) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name LIVONECINAE Schioedte & Meinert, 1884 (an incorrect original spelling of LIRONECINAE Schioedte & Meinert, 1884).

References

Bowman, T.E. & Tareen, I.U. 1983. Cymothoidae from fishes of Kuwait (Arabian Gulf) (Crustacea: Isopoda). *Smithsonian Contributions to Zoology*, **382**: 1–30.

Bowman, T.E., Bunkley-Williams, L. & Williams, E.H. Jr. 1995. (In preparation). *Database of the cymothoid isopods*. (Interactive Electronic Data Base).

Bunkley-Williams, L. & Williams, E.H. Jr. 1987. Three new species of *Renocila* (Crustacea: Isopoda: Cymothoidae) external parasites of coral reef fishes from the Ryukyu Islands of Japan. *Proceedings of the Biological Society of Washington*, **100**: 417–432.

Gurjanova, E.F. 1936. Isopodes des mers orientales. *In* Stackelberg, A.A. (Ed.), *Fauna de l'URSS*, vol. 7, Crustacées, part 3. 278 pp. L'Académie des Sciences de l'URSS, U.S.S.R. [In Russian].

Leach, W.E. 1818. Cymothoadées, Cymothoadae (Crustacea). Pp. 338–354 *in* Cuvier, F. (Ed.), *Dictionnaire des sciences naturelle*, vol. 12. 354 pp. Paris & Strasbourg.

Monod, T. 1931. Sur quelques crustacés aquatiques d'Afrique (Cameroun et Congo). *Revue de Zoologie et de Botanique Africaines*, **21**(1): 1–36.

Schioedte, J.C. & Meinert, F. 1884. Symbolae et monographiam cymothoarum crustaceorum isopodum familiae, IV: Cymothoidae. *Naturhistorisk Tidsskrift*, (3)**14**: 221–454.

Sivertsen, E. & Holthuis, L.B. 1980. The marine isopod Crustacea of the Tristan da Cunha Archipelago. *Gunneria*, **35**: 1–128.

White, A. 1847. *List of the specimens of Crustacea in the collections of the British Museum*. viii, 143 pp. British Museum, London.

Williams, E.H. Jr. & Bunkley-Williams, L. 1994. *Ryukyua globosa* n. gen., n. sp., and *R. circulans* n. comb., parasites in the opercular chambers of Pacific and Indian Ocean clupeid fishes. *Journal of Aquatic Animal Health*, **6**: 155–161.

Case 2844

Oniscus asellus Linnaeus, 1758 (Crustacea, Isopoda): proposed designation of a neotype

David T. Bilton

Department of Biology, University of York, Heslington, York YO1 5DD, U.K.

Abstract. The purpose of this application is to confirm as neotype of the nominal species *Oniscus asellus* Linnaeus, 1758 a specimen from Uppsala, Sweden proposed by Bilton (1994). A specimen labelled '*asellus*' in Linnaeus's handwriting belongs to the taxon always called *Porcellio scaber* Latreille, 1804. *O. asellus* and *P. scaber* are amongst the commonest woodlice of Europe and are the type species of their genera. Acceptance of the Linnaean specimen as the name-bearing type of *O. asellus* would transfer this name to *P. scaber* as always understood, and would confuse isopod names at the ranks of family, genus and species.

---

1. The nominal species *Oniscus asellus* Linnaeus, 1758 (p. 637) was based on a four-word description and five references; as originally defined the name could apply to almost all non-conglobating species of terrestrial isopod.

2. The composite nature of *O. asellus* was recognized by early authors. The taxon was first more narrowly defined by De Geer (1778, p. 549, pl. 35, figs. 3–10), who applied the name to a woodlouse with seven antennal segments, including three in the terminal flagellum, and prominent lateral lobes on the head. The description and figures indicate that De Geer was referring to *O. asellus* as currently interpreted. However, the De Geer collection in the Naturhistoriska Riksmuseet in Stockholm contains three specimens below a label bearing the name *Oniscus asellus*. One of these is *O. asellus* as now understood, one a specimen of *Cylisticus convexus* (De Geer, 1778, p. 553), and the third an undetermined porcellionid possibly of non-European origin. The fact that a separate De Geer species (*C. convexus*) stands under the name *O. asellus* suggests that subsequent arrangement of his material has occurred.

3. Cuvier (1792, p. 22, pl. 26, figs. 11–13) introduced the name *Oniscus murarius*. The description and figures show that the species concerned is *O. asellus* sensu De Geer. In the nineteenth and early twentieth centuries the name *O. murarius* was widely used for the species (e.g. Budde-Lund, 1885; Verhoeff, 1908). Sars (1899) adopted *O. asellus* sensu De Geer (1778) and Latreille (1804), and this application of the name has for many years entirely replaced *O. murarius* for one of the commonest woodlice in Europe (see for example Vandel, 1962; Gruner, 1966; Sutton, 1972; Bilton, 1994).

4. Cuvier (1792, p. 23, pl. 26, figs. 9–10) applied the name *O. asellus* to another species, with a two-segmented antennal flagellum. He remarked that he did this for the sole reason that the species was the most common, noting that the description by Linnaeus applied equally well to three species. Latreille (1804, p. 39) did not follow

Cuvier's usage, and expressly based his new genus *Porcellio* (p. 45) on 'l'espèce qu'il [Cuvier] appelle *aselle*'; this species was described on p. 45 under the name *P. scaber*, which has been adopted by all subsequent authors. The differences between *O. asellus* and *P. scaber* are well illustrated by Sutton (1972, fig. 27). The Commission rejected '*O. asellus* Cuvier, 1792' as a junior homonym of *O. asellus* Linnaeus in Direction 88 (March 1958), but, as mentioned above, Cuvier did not propose a new name and merely applied that of Linnaeus in a way which, although different from De Geer (1778), was reasonable at the time but not adopted by Latreille (1804) or later authors.

5. The names *Oniscus* and *asellus* of Linnaeus, 1758 and *Porcellio* and *scaber* of Latreille, 1804 were placed on the relevant Official Lists in Opinion 104 (September 1928). The entry for *Oniscus* on the Official List (1987) records 'Stiles, 1928' (i.e. Opinion 104) for the designation of *O. asellus* as the type species, but this is an error: Direction 88 had noted a designation by E. Desmarest in 1858. An earlier designation of *O. asellus* (in the current sense) is that by Audouin (1823, p. 222). Latreille (1810, p. 423) had previously designated *O. murarius* as the type but he did not there synonymize this nominal species, not originally included, with *O. asellus* (although he had done so in 1804 and elsewhere).

6. The collection at the Linnean Society in London contains a single specimen labelled '*asellus*' in Linnaeus's handwriting. The label has pin-holes at both ends, and may have been attached to this specimen by a later worker (see Day & Fitton, 1978 for a discussion of this practice). The specimen is an adult male of the species always called *Porcellio scaber*, but this may simply reflect the composite nature of Linnaeus's concept of *Oniscus asellus*.

7. Acceptance of the specimen at the Linnean Society as the name-bearing type of *O. asellus* would mean reverting to the specific name *murarius* Cuvier, 1792 for *O. asellus* auct. Much more seriously, such acceptance would transfer the generic name *Oniscus* to the taxon called *Porcellio* Latreille, 1804; *Porcellio* would disappear, *P. scaber* would become *O. asellus*, and *murarius* Cuvier would need a new nominal genus. The family name ONISCIDAE would take the meaning of PORCELLIONIDAE, and a new family name would be needed to replace it. All this would create intolerable confusion.

8. To avoid the situation given in the previous paragraph and because of the early history of the name, it is desirable to define *O. asellus* by a neotype. Another reason for the present application is that I have recently described a subspecies, *O. asellus occidentalis* Bilton, 1994 (p. 332). In that paper I have differentiated *O. a. asellus* and *O. a. occidentalis*, and designated a holotype for the latter from Lydford Gorge, Devon, England. The nominotypical subspecies *O. a. asellus* Linnaeus, 1758 has no type locality but I (Bilton, 1994, p. 331) have proposed a neotype from the Linneträdgården, Uppsala, Sweden. The types of both subspecies are deposited in the Natural History Museum, London. It is necessary for the proposed neotype designation for *Oniscus asellus* to be validated by the Commission.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type specimens for the nominal species *Oniscus asellus* Linnaeus, 1758 and to designate as neotype the specimen from Uppsala, Sweden proposed by Bilton (1994);

(2) to amend the entry for *Oniscus* Linnaeus, 1758 on the Official List of Generic Names in Zoology to record that *O. asellus* was designated as the type species by Audouin (1823);
(3) to add to the entry for *Oniscus asellus* Linnaeus, 1758 on the Official List of Specific Names in Zoology an endorsement recording that this nominal species is to be defined by the neotype designated in (1) above.

References

Audouin, J.V. 1823. Cloporte. *Oniscus*. Pp. 222 223 *in* Bory de Saint-Vincent, J.B.G.M. (Ed.), *Dictionnaire classique d'Histoire naturelle*, vol. 4. 628 pp. Paris.
Bilton, D.T. 1994. Intraspecific variation in the terrestrial isopod *Oniscus asellus* Linnaeus, 1758 (Crustacea: Isopoda: Oniscidea). *Zoological Journal of the Linnean Society* (London), **110**: 325–354.
Budde-Lund, G. 1885. *Crustacea Isopoda Terrestria, per familias et genera et species descripta*. 319 pp. Havniae.
Cuvier, G.L.C.F.D. 1792. Mémoire sur les cloportes terrestres. *Journal d'Histoire Naturelle*, **2**: 18–31.
Day, M.C. & Fitton, M.G. 1978. Recuration of the Linnaean Hymenoptera (Insecta), with a reassessment of the taxonomic importance of the collection. *Biological Journal of the Linnean Society* (London), **10**: 181–198.
De Geer, C. 1778. *Mémoires pour servir à l'histoire des insectes*, vol. 7. xii, 950 pp., 49 pls. Hesselberg, Stockholm.
Gruner, H.E. 1966. *Der Tierwelt Deutschlands*: Krebstiere oder Crustacea 5: Isopoda, vol. 2. Fischer, Jena.
Latreille, P.A. 1804. *Histoire naturelle, générale et particulière, des crustacés et des insectes*, vol. 7. 413 pp. Dufart, Paris.
Latreille, P.A. 1810. *Considerations générales sur ... les classes des crustacés, des arachnides, et des insectes*. 444 pp. Schoell, Paris.
Linnaeus, C. 1758. *Systema Naturae*, Ed. 10, vol. 1. 824 pp. Salvii, Holmiae.
Sars, G.O. 1899. *An account of the Crustacea of Norway*. II. Isopoda. 270 pp. Bergen.
Sutton, S.L. 1972. *Woodlice*. 144 pp. Ginn, London.
Vandel, A. 1962. Isopodes terrestres (deuxième partie). *Faune de France*, **66**: 417–931.
Verhoeff, K.W. 1908. Über Isopoden. 15. Isopoden-Aufsatz. *Archiv für Biontologie*, **2**: 335–387.

Case 2866

MEGALODONTIDAE Morris & Lycett, 1853 (Mollusca, Bivalvia) and MEGALODONTIDAE Konow, 1897 (Insecta, Hymenoptera): proposed removal of homonymy

Neil D. Springate

Muséum d'Histoire Naturelle, Case postale 6434, CH-1211 Genève 6, Switzerland

Abstract. The purpose of this application is to remove the homonymy between two family names of Hymenoptera and fossil Bivalvia. It is proposed that the complete name of the sawfly genus *Megalodontes* Latreille, 1802 be adopted as the stem of the corresponding family-group names, giving MEGALODONTESIDAE Konow, 1897. The mollusc name MEGALODONTIDAE Morris & Lycett, 1853 would remain unchanged.

---

1. Morris & Lycett (1853, p. 78) proposed the family-group name Megalonidae for three genera of fossil bivalve molluscs, based on the Triassic genus *Megalodon* Sowerby, 1827 (p. 131), type species *M. cucullatus* Sowerby, 1827 (p. 132). The family name was corrected by Zittel (1881, p. 69) to MEGALODONTIDAE, and has been used at superfamily rank as MEGALODONTACEA. Under Article 33b of the Code, Morris & Lycett (1853) are the authors of the name MEGALODONTIDAE.

2. Konow (1897, p. 1) proposed the family-group name Megalodontides, based on the genus of extant Symphyta (Insecta, Hymenoptera) *Megalodontes* Latreille, 1802 (p. 302), type species by monotypy *Tenthredo cephalotes* Fabricius, 1781 (p. 408). Ashmead (1898, p. 207) corrected the suffix to form MEGALODONTINAE and MacGillivray (1906, p. 644) raised it to family rank as MEGALODONTIDAE.

3. Both the family names MEGALODONTIDAE Morris & Lycett, 1853 (Mollusca) and MEGALODONTIDAE Konow, 1897 (Insecta) are correctly formed and are in general use. To base a new family-group name on another genus included within MEGALODONTIDAE Konow, 1897 would cause immeasurable confusion. To remove the homonymy it is therefore proposed that the full generic name of the genus *Megalodontes* Latreille, 1802 is used as the stem, so that hymenopteran family-group names based on it would become MEGALODONTESIDAE (or MEGALODONTESINAE, as the case may be). In accordance with Article 55b of the Code this case is referred to the Commission.

4. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to rule that for the purposes of Article 29 the stem of the generic name *Megalodontes* Latreille, 1802 is MEGALODONTES-;

(2) to place the following names on the Official List of Generic Names in Zoology:
   (a) *Megalodontes* Latreille, 1802 (gender: masculine), type species by monotypy *Tenthredo cephalotes* Fabricius, 1781;
   (b) *Megalodon* Sowerby, 1827 (gender: masculine), type species by monotypy *Megalodon cucullatus* Sowerby, 1827;

(3) to place the following names on the Official List of Specific Names in Zoology:
   (a) *cephalotes* Fabricius, 1781, as published in the binomen *Tenthredo cephalotes* (specific name of the type species of *Megalodontes* Latreille, 1802);
   (b) *cucullatus* Sowerby, 1827, as published in the binomen *Megalodon cucullatus* (specific name of the type species of *Megalodon* Sowerby, 1827);
(4) to place the following names on the Official List of Family-Group Names in Zoology:
   (a) MEGALODONTESIDAE Konow, 1897, type genus *Megalodontes* Latreille, 1802 (spelling emended by the ruling in (1) above) (Insecta, Hymenoptera);
   (b) MEGALODONTIDAE Morris & Lycett, 1853, type genus *Megalodon* Sowerby, 1827 (Mollusca, Bivalvia);
(5) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name MEGALODONTIDAE Konow, 1897 (spelling emended to MEGALODONTESIDAE in (1) above).

Acknowledgements

The assistance of Barry Bolton and Noel Morris (respectively of the Departments of Entomology and Palaeontology, The Natural History Museum, London) with the derivation of Greek nomenclature and the tracing of family-group names in fossil Bivalvia respectively is acknowledged gratefully. This paper is part of a Ph.D. study supervised by Daniel Burckhardt and Willy Matthey, supported by the Université de Neuchâtel and funded by the Fonds national suisse de la recherche scientifique (project no. 31–30864.91).

References

Ashmead, W.H. 1898. Classification of the horntails and sawflies, or the sub-order Phytophaga. *The Canadian Entomologist*, **30**: 205–213.

Fabricius, J.C. 1781. *Species Insectorum* ..., vol. 1. 552 pp. Hamburgi & Kilonii.

Konow, F.W. 1897. Systematische und kritische Bearbeitung der Blattwespen-Tribus Lydini. *Annalen des Königlichen-Kaiserlichen Naturhistorischen Hofmuseums*, (Wien), **12**: 1–32.

Latreille, P.A. [1802]. *Histoire naturelle, générale et particulière des crustacés et des insectes*, vol. 3. 468 pp. Dufart, Paris.

MacGillivray, A. de C. 1906. A study of the wings of the Tenthredinoidea, a superfamily of the Hymenoptera. *Proceedings of the United States National Museum*, **29**: 569–654.

Morris, J. & Lycett, J. 1853. *A monograph of the Mollusca from the Great Oolite, chiefly from Minchinhampton and the coast of Yorkshire*, part 2 (bivalves). 80 pp. Palaeontographical Society, London.

Sowerby, J. de C. 1827. *The mineral conchology of Great Britain*, part 97 (vol. 6, pp. 121–131). Meredith, London.

Zittel, K.A. 1881. *Handbuch der Palaeontologie*, Abtheilung 1 (Palaeozoologie), Band 2 (Mollusca und Arthropoda). 893 pp. Oldenburg, Munich & Leipzig.

Case 2638

Apis terrestris Linnaeus, 1758, *A. muscorum* Linnaeus, 1758 and *A. lucorum* Linnaeus, 1761 (currently *Bombus terrestris*, *B. muscorum* and *B. lucorum*) and *Bombus humilis* Illiger, 1806 (Insecta, Hymenoptera): proposed conservation of usage of the specific names

Astrid Løken

Hovseterveien 96, N-0768 Oslo, Norway

Antti Pekkarinen

Department of Zoology, Division of Ecology, P.O. Box 17 (P. Rautatiekatu 13), FIN-00014 University of Helsinki, Finland

Pierre Rasmont

Laboratoire de Zoologie, Université de Mons-Hainaut, Avenue Maistriau, B-7000 Mons, Belgium

Abstract. The purpose of this application is the conservation of the established usage of the specific names of four common species of European bumble bees, all now placed in the genus *Bombus* Latreille, 1802. This usage is in agreement with the original descriptions of the species, but lectotype designations for *B. terrestris* (the type species of *Bombus*) and *B. muscorum* have been made which, if followed, would have the following consequences: *B. terrestris* would be called *B. audax*, *B. lucorum* would become *B. terrestris*, *B. muscorum* would be called *B. laevis*, and *B. humilis* would become *B. muscorum*. These changes, especially the name transfers, would be very confusing and it is proposed that they be avoided by the designation of neotypes for *B. terrestris* and *B. muscorum*.

---

1. Linnaeus (1758, p. 578) described *Apis terrestris* as 'A[pis] hirsuta nigra, thoracis cingulo flavo, ano albo ... Habitat in Europae terra ...'; he cited eight earlier references but mentioned no specimens. The nominal species *A. terrestris* is the type by monotypy of *Bombus* Latreille, 1802 (p. 437); this generic name was placed on the Official List in Opinion 220 (March 1954) but no mention was made of the taxonomic sense (i.e. typification) of *A. terrestris* itself.

2. The collection of the Linnean Society of London contains four specimens under the name *A. terrestris*. Three queen specimens are mounted in the same row; the first of these is labelled 'terrestris' while the others are unlabelled. In her revision of Scandinavian bumble bees Løken (1973, p. 53) pointed out that only the third queen is in agreement with the accepted taxonomic use of the name *terrestris*, but in order to maintain stability she continued to use the name 'in sensu past and present authors'. Løken considered that two of the Linnean Society specimens were females of *Bombus lucorum* (Linnaeus, 1761) as understood by authors; Linnaeus had described this species from the male (see para. 6 below).

3. Day (1979, p. 74) noted that the third queen in the Linnean Society collection (see previous para.) is a specimen of *B. terrestris* auct. but of British origin (as shown by its buff tail segment: continental specimens are white in this respect (cf. Linnaeus's description 'ano albo' in para. 1 above)). Day designated the first (labelled) queen as the lectotype of *Apis terrestris* and the second as a paralectotype, although he noted that this lectotype is not in accord with the stable concept of the name (see para. 11 below).

4. One of us (P.R.) has studied Day's lectotype and paralectotype of *A. terrestris* and concluded that, rather than belonging to *B. lucorum* (see para. 2 above), they are possibly specimens of *Bombus cryptarum* (Fabricius, 1775 (p. 379)), which is a species very closely related to *B. lucorum* (see Rasmont et al., 1986).

5. The specific name of *Apis audax* Harris, [1776] (p. 130) has been used for British specimens of *B. terrestris* auct. (see Day, 1979, p. 74), and *audax* could replace *terrestris* for this species if Day's lectotype designation were followed. Even more confusing, the name *B. terrestris* would be transferred to the *B. lucorum* of authors (or possibly to *B. cryptarum*). Williams (1985, 1986) used the names *B. audax* and *B. terrestris* in this way but authors in general have not adopted the consequences of Day's lectotype designation for *Apis terrestris*.

6. Linnaeus (1761, p. 425) described *Apis lucorum*, which he based on male specimens from Sweden. Day (1979, p. 66) designated a labelled male in the Linnean Society collection as lectotype, and this is in accord with the established usage of the name.

7. Linnaeus (1758, p. 579) described *Apis muscorum*, citing three references but mentioning no specimens; he had previously described the species as early as 1736. In the collection of the Linnean Society there are three specimens (two queens, one of which is labelled '32 muscorum', and one worker) under this name, but they are conspecific with *Bombus humilis* Illiger, 1806 (p. 171) and in disagreement with Linnaeus's description and the accepted usage of the name *muscorum*. The discrepancy between the description and the labelled specimen was pointed out by Krüger (1932, p. 148) and Richards (1935, p. 74), although Day (1979, p. 68) said 'It agrees with description'. Richards considered that the Linnean Society specimen(s) may not be pre-1758 material, and in the interest of stability deliberately maintained the use of *B. muscorum* 'for the species which is universally known by that name at the present time'; Løken (1973, p. 146) did the same.

8. In 1947 H. Boschma, acting on behalf of the nomenclature committee of the Nederlandse Entomologische Vereniging, forwarded an application (originally formulated by G. Kruseman of the Amsterdam Zoological Museum) to the Commission Secretary (F. Hemming) asking for conservation of 'the well-known name *Bombus muscorum* Linné, 1758 in the sense of Fabricius and later authors'. Hemming (May 1947) requested 'an up-to-date statement by a specialist in the group concerned regarding the identity of the specimen in the Linnean collection' but this was not forthcoming and no further action was taken. Hemming took the view that 'there is extremely little evidence to support the allegation (sometimes made) that J.E. Smith added other specimens after he acquired the collection [in 1784]', but in fact specimens of Hymenoptera were added after 1757 in Sweden and later also by Smith (see Day & Fitton, 1978, p. 183); presumably this had happened in the case of the British specimen of *A. terrestris* (para. 3 above).

9. Day (1979, p. 68) designated the female specimen in the Linnean Society collection labelled '32 muscorum' (see para. 7 above) as the lectotype of *Apis muscorum* Linnaeus, 1758, despite its discrepancy with the original description of the species and the established usage. This designation has the effect of transferring the name *muscorum* to the species known as *Bombus humilis* Illiger, 1806 and of requiring a valid replacement name for *B. muscorum* as it has long been understood. Day (1979, p. 68) suggested that the name *laevis*, published by Vogt (1909, p. 63) as *B. muscorum laevis*, 'may be [the] next available name for the species commonly known as *B. muscorum*'. Williams (1985, 1986) adopted *B. muscorum* for *B. humilis* auct. and *B. laevis* for *B. muscorum* auct., although expressing reservations in the earlier paper, but the double name change resulting from Day's lectotype selection has not been generally followed.

10. We seek conservation of the long established and current usage of the specific names of *Bombus terrestris*, *B. lucorum*, *B. humilis* and *B. muscorum*, and in particular to avoid the transfer of names between species. The names have been used in a stable sense by numerous workers in hundreds of publications (e.g. Løken, 1973; Alford, 1975; Pekkarinen, 1979; Rasmont, 1983; Rasmont, 1984; Hagen, 1986; Rasmont et al., 1986; Prys-Jones & Corbet, 1987); the Commission Secretariat has a list of 21 such publications in addition to those mentioned in this application. Macfarlane (1988, p. 8), supporting our approach to the Commission over these cases, wrote 'I consider changing the useage away from the longstanding and traditional use does not serve science well ... a situation has arisen ... in which confusion in the taxa is being generated for scientists other than taxonomic specialists ... The literature on these four species is confusing enough without compounding the difficulties by letting a gradual or incomplete change in the meaning of the names to occur. *B. terrestris* and *B. lucorum* are amongst the best known species of bumble bees, which are well known insects of economic value'. Macfarlane mentioned that *B. terrestris* had been introduced into New Zealand, where it was of importance in the pollination of lucerne and kiwifruit. He stated that he had received support for the conservation of the traditional sense of the *Bombus* names from 'eminent researchers who deal with bees from France, Belgium, the United States, Chile, and New Zealand, and only one objection from the United Kingdom'.

11. In making his lectotype designations in a contrary sense, Day (1979) himself noted (p. 78) 'Names are here applied in strict accordance with the International Code of Zoological Nomenclature, irrespective of current usage. The current application of the names *Bombus muscorum* (L.), *B. humilis* Illiger, *B. lucorum* (L.), *B. terrestris* (L.) ... may well be considered worthy of conservation by interested zoologists by suspension of the rules by the International Commission on Zoological Nomenclature'.

12. The usage of the four specific names mentioned in the previous paragraph can be conserved by setting aside the lectotypes designated by Day (1979) for *Apis terrestris* and *A. muscorum* Linnaeus, 1758, and then designating neotypes in accord with the established understanding of the names. We propose as neotypes two specimens from Sweden, now in the Naturhistoriska Riksmuseet, Stockholm. The specimen of *A. terrestris* is a queen with a red label reading 'NEOTYPE Apis terrestris L., 1758 A. Pekkarinen des. 1994', a white label reading 'Upl. Rådmansö Västernäs 7.8.1970 leg. S. Erlandsson', a white label

reading 'Bombus terrestris (L.) A. Løken det.' and a blue label reading 'Naturhistoriska Riksmuseet Stockholm Loan 262/94'. The specimen of *A. muscorum* is also a queen, with a red label reading 'NEOTYPE Apis muscorum L., 1758 A. Pekkarinen des. 1994', a white label reading 'Sk. Arkelstorp 5.7.1947 B.O. Landin', a white label reading 'Bombus muscorum L., A. Løken det.' and a blue label reading 'Naturhistoriska Riksmuseet Stockholm Loan 268/94'.

13. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type specimens for the nominal species *Apis terrestris* and *A. muscorum* Linnaeus, 1758, and to designate the first and second specimens mentioned in para. 12 above as the respective neotypes;

(2) to add to the entry for *Apis terrestris* Linnaeus, 1758 on the Official List of Specific Names in Zoology the endorsement that the nominal species is defined by the neotype designated in (1) above;

(3) to place the following names on the Official List of Specific Names in Zoology:
   (a) *muscorum* Linnaeus, 1758, as published in the binomen *Apis muscorum* and as defined by the neotype designated in (1) above;
   (b) *lucorum* Linnaeus, 1761, as published in the binomen *Apis lucorum* and as defined by the lectotype designated by Day (1979);
   (c) *humilis* Illiger, 1806, as published in the binomen *Bombus humilis*.

References

Alford, D.V. 1975. *Bumblebees*. 352 pp. Davis-Poynter, London.

Day, M.C. 1979. The species of Hymenoptera described by Linnaeus in the genera *Sphex*, *Chrysis*, *Vespa*, *Apis* and *Mutilla*. *Biological Journal of the Linnean Society* (London), **12**: 45–84.

Day, M.C. & Fitton, M.G. 1978. Re-curation of the Linnaean Hymenoptera (Insecta), with a reassessment of the taxonomic importance of the collection. *Biological Journal of the Linnean Society* (London), **10**: 181–198.

Fabricius, J.C. 1775. *Systema Entomologiae*, ... xxxii, 832 pp. Kortii, Flensburgi et Lipsiae.

Hagen, E. von. 1986. *Hummeln*. 224 pp. Neumann, Melsungen.

Harris, M. [1776–1780]. *Exposition of English Insects*. viii, 166 pp., 53 pls. Author, London.

Illiger, J.C.W. 1806. William Kirby's Familien der Bienenartigen Insecten mit Zusätzen, Nachweisungen u. Bemerkungen. *Magazin für Insektenkunde*, **5**: 28–175.

Krüger, E. 1932. Über die Farbervariationen der Hummelart *Bombus agrorum* Fabr. II Teil. *Zeitschrift für Morphologie und Ökologie der Tiere*, **24**: 148–237.

Latreille, P.A. 1802. *Histoire naturelle des Fourmis*, ... xvi, 445 pp., 12 pls. Barrois, Paris.

Linnaeus, C. 1758. *Systema Naturae*, Ed. 10, vol. 1. 824 pp. Salvii, Holmiae.

Linnaeus, C. 1761. *Fauna Suecica*, Ed. 2. 578 pp. Salvii, Stockholmiae.

Løken, A. 1973. Studies on Scandinavian bumble bees (Hymenoptera, Apidae). *Norsk Entomologisk Tidskrift*, **20**: 1–218.

Macfarlane, R.P. 1988. *Bombus terrestris* (L.): does a change in its useage really serve science? *Melissa*, **3**: 7–9.

Pekkarinen, A. 1979. Morphometric, colour and enzyme variation in bumblebees (Hymenoptera, Apidae, *Bombus*) in Fennoscandia and Denmark. *Acta Zoologica Fennica*, **158**: 1–60.

Prys-Jones, O.E. & Corbet, S.A. 1987. *Bumble bees. Naturalists' Handbook*, no. 6. 86 pp. Cambridge University Press, Cambridge.

Rasmont, P. 1983. Catalogue commenté des bourdons de la région ouest-paléarctique (Hymenoptera, Apoidea, Apidae). *Notes fauniques de Gembloux*, **7**: 1–71.

Rasmont, P. 1984. Les bourdons du genre *Bombus* Latreille *sensu stricto* en Europe Occidentale et Centrale (Hymenoptera, Apidae). *Spixiana*, **7**: 135–160.

Rasmont, P., Scholl, A., Jonghe, R. de, Obrecht, E. & Adamski, A. 1986. Identité et variabilité des mâles de bourdons du genre *Bombus* Latreille *sensu stricto* en Europe occidentale et centrale (Hymenoptera, Apidae, Bombinae). *Revue suisse de Zoologie*, **93**: 661–682.

Richards, O.W. 1935. *Bombus muscorum* (Linnaeus) and *B. smithianus* White (Hym.). *Transactions of the Society for British Entomology*, **2**: 73–85.

Vogt, O. 1909. Studien über das Artproblem. Über das Variieren der Hummeln. *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin*, **1909**: 28–84.

Williams, P.H. 1985. A preliminary cladistic investigation of relationships among the bumble bees (Hymenoptera, Apidae). *Systematic Entomology*, **10**: 239–255.

Williams, P.H. 1986. Environmental change and the distributions of British bumble bees. *Bee World*, **67**: 50–61.

Case 2936

CAECILIIDAE Rafinesque-Schmaltz, 1814 (Amphibia, Gymnophiona) and CAECILIIDAE Kolbe, 1880 (Insecta, Psocoptera): proposed removal of the homonymy by the revocation of Opinion 1462 and the adoption of the spelling CAECILIUSIDAE for the psocopteran family name

M.H. Wake

Department of Integrative Biology and Museum of Vertebrate Zoology, University of California, Berkeley, California 94720–3140, U.S.A.

A. Dubois

Muséum national d'Histoire naturelle, 25 rue Cuvier, 75005 Paris, France

D.R. Frost

American Museum of Natural History, 79th St. and Central Park West, New York, NY 10024, U.S.A.

T.E. Moore & R.A. Nussbaum

Museum of Zoology, University of Michigan, Ann Arbor, Michigan 48109–1079, U.S.A.

Abstract. The purpose of this application is the conservation of the very well known family name CAECILIIDAE Rafinesque-Schmaltz, 1814 for caecilian amphibians. This name is a senior homonym of the insect name CAECILIIDAE Kolbe, 1880. Because it had been suggested that the emendation CAECILIUSIDAE of the latter would be non-euphonious, the amphibian name was emended to CAECILIAIDAE in Opinion 1462 (December 1987). The reversal of this ruling is sought in pursuit of both stable usage and adherence to priority; furthermore CAECILIAIDAE is both non-euphonious and cumbersome.

---

1. In January 1980 H.M. Smith, U. Lanham and A. Loveridge drew to the attention of the then Commission Secretary the homonymy which existed between old family-group names based on *Caecilia* Linnaeus, 1758 (caecilian amphibians) and *Caecilius* Curtis, 1837 (psocopteran insects). In 1981 T.E. Moore, R.A. Nussbaum and E.L. Mockford independently submitted a detailed application to remove the homonymy, and Smith et al. supported the need for this. Smith remarked (in litt., 20 February 1981) '*Caecilius* does not lend itself well to a family name that accurately reflects the name of the type genus, viz. CAECILIUSIDAE'. The application by Moore et al. was published as Case 2333 in July 1983 (BZN **40**: 124–128); they proposed that, because it was the older, the amphibian family name (which they attributed to Gray, 1825) should remain unchanged and that the psocopteran name CAECILIIDAE Kolbe, 1880 should be emended. The suggested spelling was CAECILIONIDAE.

2. Smith & Polhemus (BZN **41**: 108–109) commented that a family name should clearly indicate the generic name on which it was based; CAECILIONIDAE did not do this and indeed implied a non-existent generic name. They proposed that the amphibian name should be emended to CAECILIAIDAE because this was 'much more euphonious' than would be CAECILIUSIDAE (see Smith's remark in para. 1 above) in the Psocoptera. Moore (BZN **41**: 207–208) replied that he and Drs Nussbaum and Mockford had rejected both CAECILIAIDAE and CAECILIUSIDAE because of their 'unexpected spelling and form'; they had left the amphibian name unchanged because of its priority and because 'psocids are not particularly widely or popularly discussed animals and ... only a relatively few authors have used this group name in insects'. We note that Dr Mockford is a specialist in the Psocoptera. To meet the objections of Smith & Polhemus to the basis of CAECILIONIDAE, Moore et al. 'reluctantly suggested' a new generic name *Caecilionis*; this would replace *Caecilius*, which would have to be suppressed by the Commission. M.H. Wake (BZN **42**: 220–221) also supported the proposal that the amphibian name should remain unchanged; she considered that usage made this important, and that CAECILIAIDAE was not easy to pronounce and not conspicuously distinct from CAECILIIDAE.

3. In 1986 Dubois (BZN **43**: 6) pointed out that the first publication of the amphibian family name was by Rafinesque-Schmaltz (1814), who spelled it as 'Cecilinia'. By Article 32c(iii) of the Code this incorrect original spelling is corrected to CAECILIIDAE.

4. In March 1987 the Executive Secretary issued voting papers on the CAECILIIDAE case to members of the Commission. The various comments which had been made were reviewed, and it was suggested that perhaps the least disruptive course would be to emend the amphibian name to CAECILIAIDAE, leaving the insect name unchanged. The Commission was not asked to vote on the possible adoption of CAECILIUSIDAE for the psocopteran family, because this name had not been advocated (for reasons only of euphony, as mentioned above) by any of the participants in the case.

5. As reported in Opinion 1462 (BZN **44**: 263–264, December 1987), by 19 votes to 4 the Commission accepted the amendment of CAECILIIDAE Rafinesque-Schmaltz, 1814 (Amphibia) to CAECILIAIDAE and left CAECILIIDAE Kolbe, 1880 (Psocoptera) unchanged. However, three Commissioners stated that they would have preferred to emend the latter name to CAECILIUSIDAE and others commented that it would have been desirable to retain CAECILIIDAE in Amphibia for reasons of both priority and usage.

6. In December 1988 one of us (Frost) wrote to the Executive Secretary (Dr P.K. Tubbs) saying 'I was dismayed by the resolution of the CAECILIIDAE controversy, as were Marvalee Wake and Alain Dubois. It seems that the solution reached was that most unacceptable to everyone'. Tubbs replied 'In retrospect, I do myself regret that CAECILIUSIDAE was not adopted for the Psocoptera, leaving CAECILIIDAE in amphibia ... but unfortunately that name had never received support in all the long correspondence'. There was further correspondence in 1990–1993 between Wake and the Executive Secretary on this case, and we are now applying for the revocation of the ruling in Opinion 1462 on the spelling of the family names.

7. We wish to make the following points:

(a) The amphibian genus *Caecilia* Linnaeus, 1758 is extremely well known and is 79 years senior to the relatively obscure *Caecilius* Curtis, 1837.

(b) The family-group name based on *Caecilia* was first published in 1814, 66 years before that based on the insect name. In accordance with the Principle of Priority and in the absence of a reason for a contrary discrimination between the homonyms, the Commission should have protected the earlier (amphibian) name and changed the junior homonym, as had been asked by Moore, Nussbaum & Mockford (see para. 1 above).

(c) The amphibian family name CAECILIIDAE has been very widely used for over 150 years, and indeed until 1968 all caecilians were placed in this family. Since the publication of Opinion 1462 in December 1987 there has been only limited mention of the cumbersome emendation CAECILIAIDAE which was introduced there. This usage has been motivated only by attempts at formal compliance (but not agreement) with the Opinion, and nearly all of it has been by one or more of us (sometimes with co-authors). It is unlikely that this spelling will enter general use or be introduced into the popular and semi-popular literature dealing with amphibians.

(d) In cases of identical family-group names we support, as a standard convention to remove homonymy and ambiguity, the use of an entire generic name as the stem of a family name. Unless there are strong reasons to the contrary it is the junior homonym which should be altered. In this case we request that the complete name *Caecilius* be used as the stem, to give CAECILIUSIDAE Kolbe, 1880. We do not consider that it is too late for this course to be the best in the interest of stability.

8. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers:
  (a) to revoke paragraphs (1), (4) and (5) of the Ruling in Opinion 1462;
  (b) to rule that for the purposes of Article 29 of the Code the stem of the generic name *Caecilius* Curtis, 1837 is CAECILIUS-;

(2) to place on the Official List of Family-Group Names in Zoology the following names:
  (a) CAECILIIDAE Rafinesque-Schmaltz, 1814, type genus *Caecilia* Linnaeus, 1758 (Amphibia);
  (b) CAECILIUSIDAE Kolbe, 1880, type genus *Caecilius* Curtis, 1837 (spelling emended in (1)(b) above) (Insecta, Psocoptera);

(3) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the following names:
  (a) CAECILIIDAE Kolbe, 1880 (spelling emended in (1)(b) above to CAECILIUSIDAE);
  (b) CECILINIA Rafinesque-Schmaltz, 1814 (an incorrect original spelling of CAECILIIDAE).

References

The references in this case are those in the *Bulletin* which are mentioned above, or are cited in them.

Case 2362

PHRYNOBATRACHINAE Laurent, 1941 (Amphibia, Anura): proposed conservation

Alain Dubois

Laboratoire des Reptiles et Amphibiens, Muséum National d'Histoire Naturelle, 25 rue Cuvier, 75005 Paris, France

Abstract. The purpose of this application is to conserve the name PHRYNOBATRACHINAE Laurent, 1941 for a subfamily of frogs (family RANIDAE) found throughout sub-Saharan Africa. The name is threatened by three earlier potential synonyms, HEMIMANTIDAE Hoffmann, 1878, PETROPEDETINAE Noble, 1931 and CACOSTERNINAE Noble, 1931.

---

1. Noble (1931) proposed a new classification of the Amphibia. He divided the family RANIDAE into six subfamilies. One of these, the ARTHROLEPTINAE (p. 515), included the genera *Arthroleptis* A. Smith, 1849, *Phrynobatrachus* Günther, 1862, *Cardioglossa* Boulenger, 1900, *Dimorphognathus* Boulenger, 1906, *Schoutedenella* De Witte, 1921 and *Arthroleptella* Hewitt, 1926. Another subfamily, the PETROPEDETINAE (p. 520), included the genera *Petropedetes* Reichenow, 1874 and *Arthroleptides* Nieden, 1911. In addition, Noble grouped the two genera *Cacosternum* Boulenger, 1887 and *Anhydrophryne* Hewitt, 1919 in a subfamily CACOSTERNINAE (p. 540) of his family BREVICIPITIDAE.

2. The type species of *Petropedetes* Reichenow, 1874 (p. 290) is *P. cameronensis* Reichenow, 1874 (p. 290, pl. 9, figs. 2, 2a, 2b) by monotypy; the type species of *Cacosternum* Boulenger, 1887 (p. 51) is *C. nanum* Boulenger, 1887 (p. 52) also by monotypy. In 1849, A. Smith (Appendix, pp. 23–24) described *Stenorhynchus natalensis* as a new genus and species from 'country around Port Natal' (i.e. Durban). A specimen in the Natural History Museum, London (catalogue no. BM(NH) 58.11.25), which may well be type material, was recorded (Günther, 1859, p. 133) as 'Adult female. Natal. Presented by Sir A. Smith'. Günther (1862, p. 190) described *Phrynobatrachus natalensis*, without reference to Smith's taxon, on 'a single specimen in a collection sent by Mr T. Ayres from Port Natal'. This specimen is catalogue no. BM(NH) 62.3.14.20 (re-registered as no. 1947.2.5.13). Subsequently, Günther (1864, p. 481) noted: '*Phrynobatrachus natalensis*, Günth. Proc. Zool. Soc. 1862, p. 190, is identical with *Stenorhynchus natalensis*, Smith – a frog which I omitted to compare when describing *Phrynobatrachus* ... Peters proposed the generic name of *Leptoparius* for that of *Stenorhynchus*, because the latter is preoccupied (Monatsber. Akad. Wiss. Berl. 1863, p. 452); *Phrynobatrachus*, however, has the priority'. The synonymy between *S. natalensis* Smith and *P. natalensis* Günther, and the replacement of the junior homonym *Stenorhynchus* Smith by *Phrynobatrachus*, was accepted by Bocage (1866, p. 54), Boulenger (1882, pp. 111–112, who listed both Smith's and Günther's specimens as female) and all subsequent authors (see, for example, Poynton, 1964, p. 139; Poynton & Broadley, 1985, p. 160). The type species of *Phrynobatrachus* (i.e.

Phrynobatrachus natalensis Günther, 1862) thus has the valid name *P. natalensis* (A. Smith, 1849).

3. On the basis of osteological studies, Laurent (1940, p. 79) suggested that the genera *Arthroleptis* and *Phrynobatrachus* were not as closely related as had been believed by previous workers and proposed a new subfamilial arrangement within the RANIDAE. Laurent (1941) removed the genera *Phrynobatrachus*, *Dimorphognathus* and *Arthroleptella*, and also *Natalobatrachus* Hewitt & Methuen, 1913, from the ARTHROLEPTINAE and placed them in the same subfamily as *Petropedetes* and *Arthroleptides* and also *Phrynodon* Parker, 1935. For this subfamily, instead of adopting Noble's existing name PETROPEDETINAE, Laurent (1941, p. 192) proposed the new name PHRYNOBATRACHINAE.

4. Laurent (1941, p. 217), after others, referred the genera *Cacosternum*, *Anhydrophryne* and also *Microbatrachella* Hewitt, 1926 to the RANIDAE but maintained them in a distinct subfamily CACOSTERNINAE. Poynton (1964, pp. 137–156) merged these three genera, and also *Nothophryne* Poyton, 1963, in the same subfamily as the seven other genera already grouped by Laurent (1941) in his PHRYNOBATRACHINAE (para. 3 above). For this subfamily, instead of adopting either PETROPEDETINAE or CACOSTERNINAE, both of Noble (1931), he used the name PHRYNOBATRACHINAE Laurent, 1941. Laurent (1972a, p. 104; 1973, p. 666) and others (Haacke, 1970; Savage, 1973; Dowling & Duellman, 1978) accepted Poynton's (1964) taxonomic arrangement and included the 11 genera mentioned above in a single subfamily. Other authors (Kuhn, 1965; Liem, 1970; Lynch, 1973) still recognized the CACOSTERNINAE as a distinct subfamily.

5. Following Laurent (1941), most authors have agreed with the placement of *Phrynobatrachus* (and related genera) and *Petropedetes* (and related genera) in a single subfamily. However, no general agreement has been reached as to which name should be used. Laurent himself changed his mind several times. He (Laurent, 1941, p. 192; 1942, p. 417) first used the name PHRYNOBATRACHINAE; subsequently he (Laurent, 1951, p. 119) wrote 'Petropedetinae (= Phrynobatrachinae)'. He (Laurent, 1961, p. 197; 1972a, p. 104; 1972b, p. 198; 1973, p. 666) later reverted to PHRYNOBATRACHINAE, then (Laurent, 1980a, p. 419) to PETROPEDETINAE, and finally (Laurent, 1980b, p. 85; 1984, p. 98; 1986, p. 763; Laurent & Fabrezi, 1990, p. 42) to PHRYNOBATRACHINAE.

6. As a result of Laurent's inconsistency in the usage of the name for this subfamily, both names have appeared in the literature of other authors. The name PHRYNOBATRACHINAE has, however, been used more than PETROPEDETINAE. The following authors have used the name PHRYNOBATRACHINAE: Poynton (1964, p. 137; 1976, p. 218), Haacke (1970, p. 278), Liem (1970, p. 15), Broadley (1971, p. 117), Amiet (1972, p. 71; 1975, p. 48), Savage (1973, p. 354), Perret (1976, p. 21), Dowling & Duellman (1978, p. 43.2), Goin, Goin & Zug (1978, p. 237), Ohler & Kazadi (1990, p. 38) and Fabrezi (1992, p. 7). The following authors have adopted the name PETROPEDETINAE after 1941: De Witte (1952, p. 7), Perret & Mertens (1957, p. 561), Fuhn (1960, p. 224), Skelton-Bourgeois (1961, p. 322), Lynch (1973, p. 146) and Duellman & Trueb (1986, pp. 544–545). Frost (1985, p. 439) noted: 'We use the nomenclaturally correct Petropedetinae rather than the widely used junior synonym Phrynobatrachinae'. Goin & Goin (1962, p. 230) also used the name PETROPEDETINAE but only for the genera *Petropedetes* and *Arthroleptides* (i.e. sensu Noble, 1931).

Perret (1966, p. 354) wrote 'Petropedetinae ou Phrynobatrachinae'. Kuhn (1965, pp. 97–98) tentatively recognized the PETROPEDETINAE and PHRYNOBATRACHINAE as distinct subfamilies. These lists are not exhaustive but are given to demonstrate that both names have been used in recent publications. Dubois (1987a, p. 121) listed a further 12 references for the usage of PHRYNOBATRACHINAE after 1980, and a single reference (1981) in which PETROPEDETINAE was used. Recently the name PHRYNOBATRACHIDAE was used by Dubois (1992, p. 309) and Fabrezi (1993; p. 56).

7. As noted in para. 3 above, not all authors agree at present on the systematic arrangement for these African frogs. In a procedurally slightly different version of this application, I (Dubois, 1982, p. 136) acted as first reviser in selecting the name PETROPEDETINAE to have precedence over CACOSTERNINAE; both names were proposed by Noble (1931). This choice, which of course still stands, was made in order to avoid possible repeated changes in the name of the subfamily including *Phrynobatrachus* and *Petropedetes* according to whether *Cacosternum* is or is not included.

8. The name PETROPEDETINAE is not the oldest available name for the subfamily (see Dubois, 1981, p. 252). Most authors have overlooked the existence of an earlier synonym, that of HEMIMANTIDAE Hoffmann, 1878 (pp. 613, 635), which has never been used as valid. This name was proposed for a subfamily which included the single nominal genus *Hemimantis* Peters, 1863 (p. 451), of which Hoffmann considered that *Arthroleptis* A. Smith, 1849 and *Heteroglossa* Hallowell, 1858 (= *Dimorphognathus* Boulenger, 1906) were synonyms. *Hemimantis* (type species by monotypy *H. calcaratus* Peters, 1863, p. 452) is currently considered to be a junior subjective synonym of *Phrynobatrachus* Günther, 1862. The name *Hemimantis* has not been used but with better taxonomic knowledge in the future it is possible that it may be required. Depending on the placement of *Hemimantis* the name HEMIMANTIDAE is a senior subjective synonym of PETROPEDETINAE, CACOSTERNINAE or PHRYNOBATRACHINAE and, if priority were the sole consideration, would be used (as HEMIMANTINAE) as the valid name for one of these nominal subfamilies. Since the name has been completely forgotten following its original publication and is based on a generic name which has never been treated as valid, such a nomenclatural change would be disruptive and inappropriate.

9. Although the name PETROPEDETINAE has priority over PHRYNOBATRACHINAE (and CACOSTERNINAE; para. 7 above), I propose that the Commission should conserve PHRYNOBATRACHINAE as the valid name for the subfamily (or family), with the date 1878. I should certainly not have suggested this if no other need existed for action by the Commission but, since the discovery of the name HEMIMANTIDAE makes an intervention necessary, I think this opportunity should be taken to go even further and choose for this subfamily the name which seems the most appropriate and likely to stabilize the nomenclature. My reasons for choosing the name PHRYNOBATRACHINAE are as follows:

(1) The name HEMIMANTIDAE, the first available for this taxon, is based on the nominal genus *Hemimantis*, a subjective synonym of *Phrynobatrachus*. Conservation of PHRYNOBATRACHINAE Laurent, 1941 with the date 1878 would obtain a result similar to that of Article 40, which cannot be called upon in this case (see Dubois, 1987a, p. 121; 1987b, pp. 49–50).

(2) The name PHRYNOBATRACHINAE has been used more than the name PETROPEDETINAE since 1941.

(3) Since Laurent (1941) the content of the subfamily PHRYNOBATRACHINAE has remained unchanged except that additional genera have been incorporated. It is therefore appropriate to associate Laurent's name with the taxon he was the first to recognize.

(4) The genus *Phrynobatrachus* currently includes some 60 recognized species while all the other genera of the subfamily, including *Petropedetes*, contain less than 10 species. The name PHRYNOBATRACHINAE refers to the largest and best known of the genera of the subfamily.

(5) The name PHRYNOBATRACHINAE refers to one of the most primitive, 'generalized' genera of the subfamily, whilst PETROPEDETINAE and CACOSTERNINAE refer to specialized, more 'extreme' groups (see, for example, Laurent, 1941 and Poynton, 1964).

10. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers:

(a) to rule that the family-group name PHRYNOBATRACHINAE Laurent, 1941 and other family-group names based on *Phrynobatrachus* Günther, 1862 are to be given precedence over HEMIMANTIDAE Hoffman, 1878 and other family-group names based on *Hemimantis* Peters, 1863, over PETROPEDETINAE Noble, 1931 and other family-group names based on *Petropedetes* Reichenow, 1874, and over CACOSTERNINAE Noble, 1931 and other family-group names based on *Cacosternum* Boulenger, 1887;

(b) to rule that the family-group name PETROPEDETINAE Noble, 1931 and other family-group names based on *Petropedetes* Reichenow, 1874 are to be given precedence over HEMIMANTIDAE Hoffman, 1878 and other family-group names based on *Hemimantis* Peters, 1863;

(c) to rule that the family-group name CACOSTERNINAE Noble, 1931 and other family-group names based on *Cacosternum* Boulenger, 1887 are to be given precedence over HEMIMANTIDAE Hoffman, 1878 and other family-group names based on *Hemimantis* Peters, 1863;

(2) to place on the Official List of Generic Names in Zoology the following names:

(a) *Phrynobatrachus* Günther, 1862 (gender: masculine), type species by monotypy *Phrynobatrachus natalensis* Günther, 1862 (a junior subjective synonym of *Stenorhynchus natalensis* A. Smith, 1849);

(b) *Petropedetes* Reichenow, 1874 (gender: masculine), type species by monotypy *Petropedetes cameronensis* Reichenow, 1874;

(c) *Cacosternum* Boulenger, 1887 (gender: neuter), type species by monotypy *Cacosternum nanum* Boulenger, 1887;

(d) *Hemimantis* Peters, 1863 (gender: masculine), type species by monotypy *Hemimantis calcaratus* Peters, 1863;

(3) to place on the Official List of Specific Names in Zoology the following names:

(a) *natalensis* A. Smith, 1849, as published in the binomen *Stenorhynchus natalensis* (senior subjective synonym of *Phrynobatrachus natalensis* Günther, 1862, the type species of *Phrynobatrachus* Günther, 1862);

(b) *cameronensis* Reichenow, 1874, as published in the binomen *Petropedetes cameronensis* (specific name of the type species of *Petropedetes* Reichenow, 1874);

(c) *nanum* Boulenger, 1887, as published in the binomen *Cacosternum nanum* (specific name of the type species of *Cacosternum* Boulenger, 1887);

(d) *calcaratus* Peters, 1863, as published in the binomen *Hemimantis calcaratus* (specific name of the type species of *Hemimantis* Peters, 1863);

(4) to place on the Official List of Family-Group Names in Zoology the following names:

(a) PHRYNOBATRACHINAE Laurent, 1941 (1878) (type genus *Phrynobatrachus* Günther, 1862) with the endorsement that it and other family-group names based on *Phrynobatrachus* are to be given precedence over HEMIMANTIDAE Hoffmann, 1878 (type genus *Hemimantis* Peters, 1863) and other family-group names based on *Hemimantis*, over PETROPEDETINAE Noble, 1931 (type genus *Petropedetes* Reichenow, 1874) and other family-group names based on *Petropedetes*, and over CACOSTERNINAE Noble, 1931 (type genus *Cacosternum* Boulenger, 1887) and other family-group names based on *Cacosternum*, whenever their type genera are placed in the same family-group taxon;

(b) PETROPEDETINAE Noble, 1931 (1878) (type genus *Petropedetes* Reichenow, 1874) with the endorsement that it and other family-group names based on *Petropedetes* are to be given precedence over HEMIMANTIDAE Hoffman, 1878 (type genus *Hemimantis* Peters, 1863) and other family-group names based on *Hemimantis* and (by the first reviser action of Dubois, 1982) over CACOSTERNINAE Noble, 1931 (type genus *Cacosternum* Boulenger, 1887) and other family-group names based on *Cacosternum* but are not to be given priority over PHRYNOBATRACHINAE Laurent, 1941 (type genus *Phrynobatrachus* Günther, 1862) and other family-group names based on *Phrynobatrachus*, whenever their type genera are placed in the same family-group taxon;

(c) CACOSTERNINAE Noble, 1931 (1878) (type genus *Cacosternum* Boulenger, 1887) with the endorsement that it and other family-group names based on *Cacosternum* are to be given precedence over HEMIMANTIDAE Hoffman, 1878 (type genus *Hemimantis* Peters, 1863) and other family-group names based on *Hemimantis* but are not to be given priority over PETROPEDETINAE Noble, 1931 (type genus *Petropedetes* Reichenow, 1874) and other family-group names based on *Petropedetes* and PHRYNOBATRACHINAE Laurent, 1941 (type genus *Phrynobatrachus* Günther, 1862) and other family-group names based on *Phrynobatrachus*, whenever their type genera are placed in the same family-group taxon;

(d) HEMIMANTIDAE Hoffmann, 1878 (type genus *Hemimantis* Peters, 1863) with the endorsement that it and other family-group names based on *Hemimantis* are not to be given priority over PETROPEDETINAE Noble, 1931 (type genus *Petropedetes* Reichenow, 1874) and other family-group names based on *Petropedetes*, CACOSTERNINAE Noble, 1931 (type genus *Cacosternum* Boulenger, 1887) and other family-group names based on *Cacosternum*, and PHRYNOBATRACHINAE Laurent, 1941 (type genus *Phrynobatrachus* Günther, 1862) and other family-group names based on *Phrynobatrachus*, whenever their type genera are placed in the same family-group taxon.

References

Amiet, J.-L. 1972. Compte-rendu d'une mission batrachologique dans le Nord-Cameroun. *Annales de la Faculté des Sciences du Cameroun*, **12**: 63–77.

Amiet, J.-L. 1975. Ecologie et distribution des amphibiens anoures de la région de Nkongsamba (Cameroun). *Annales de la Faculté des Sciences du Cameroun*, **20**: 33–107.

Bocage, J.V. Berboza du. 1866. Lista dos reptis das possessoes portuguezas d'Africa occidental que existem no Museo de Lisboa. *Jornal de Sciencias Mathematicas, Physicas e Naturaes* (Lisboa), **1**(1): 37–56.

Boulenger, G.A. 1882. *Catalogue of the Batrachia Salientia S. Ecaudata in the collection of the British Museum*. xvi, 503 pp., 30 pls. British Museum, London.

Boulenger, G.A. 1887. Descriptions of new reptiles and batrachians in the British Museum (Natural History). Part 3. *Annals and Magazine of Natural History*, (5)**20**: 50–53.

Broadley, D.G. 1971. The reptiles and amphibians of Zambia. *Puku*, **6**: 1–143.

De Witte, G.F. 1952. Amphibiens et reptiles. *In*: *Exploration hydrobiologique du lac Tanganika (1946–1947). Résultats scientifiques*, vol. 3, part 3. Pp. 1–22, pl. 1. Brussels.

Dowling, H.G. & Duellman, W.E. 1978. Systematic herpetology: a synopsis of families and higher categories. *Publications in Herpetology*, **7**: 1.1–118.3.

Dubois, A. 1981. Liste des genres et sous-genres nominaux de Ranoidea (Amphibiens Anoures) du monde, avec identification de leurs espèces-types: conséquences nomenclaturales. *Monitore Zoologico Italiano*, (n.s.) suppl. **15**: 225–284.

Dubois, A. 1982. Phrynobatrachinae Laurent, 1940 (Amphibia, Anura): proposed conservation. *Bulletin of Zoological Nomenclature*, **39**(2): 134–140.

Dubois, A. 1987a. Living amphibians of the world: a first step towards a comprehensive checklist. *Alytes*, **5**(3): 99–149.

Dubois, A. 1987b. Again on the nomenclature of frogs. *Alytes*, **6**(1–2): 27–55.

Dubois, A. 1992. Notes sur la classification des Ranidae (Amphibiens Anoures). *Bulletin Mensuel de la Société Linnéenne de Lyon*, **61**: 305–352.

Duellman, W.E. & Trueb, L. 1986. *Biology of amphibians*. xvii, 670 pp. McGraw-Hill, New York.

Fabrezi, M. 1992. El carpo de los anuros. *Alytes*, **10**: 1–29.

Fabrezi, M. 1993. The anuran tarsus. *Alytes*, **11**: 47–63.

Frost, D.R. (Ed.). 1985. *Amphibian species of the world*. v, 732 pp. Allen Press & Association of Systematics Collections, Lawrence, Kansas.

Fuhn, I.E. 1960. Amphibia. *Fauna Republicii Populare Romîne*, **14**(1): 1–288.

Goin, C.J. & Goin, O.B. 1962. *Introduction to herpetology*. ix, 341 pp. Freeman, San Francisco.

Goin, C.J., Goin, O.B. & Zug, G.R. 1978. *Introduction to herpetology*. Ed. 3. xiii, 378 pp. Freeman, San Francisco.

Günther, A. 1859. *Catalogue of the Batrachia Salientia in the collection of the British Museum*. xvi, 160 pp., 12 pls. British Museum, London.

Günther, A. 1862. Descriptions of new species of reptiles and fishes in the collection of the British Museum. *Proceedings of the Zoological Society of London*, **1862**: 188–194.

Günther, A. 1864. Descriptions of new species of batrachians from West Africa. *Proceedings of the Zoological Society of London*, **1864**: 479–482.

Haacke, W.D. 1970. New herpetological records from South West Africa. *Annals of the Transvaal Museum*, **26**(12): 277–283.

Hoffmann, C.K. 1873–1878. Amphibia. Pp. 1–726, pls. 1–52 *in* Bronn, H.G., *Die Klassen und Ordnungen des Thier-Reichs wissenschaftlich dargestellt in Wort und Bild*, vol. 6, part 2. Winter, Leipzig.

Kuhn, O. 1965. *Die Amphibien. System und Stammesgeschichte*. 102 pp. Oeben, Krailling bei München.

Laurent, R.F. 1940. Contribution à l'ostéologie et à la systématique des ranides africains. Première note. *Revue de Zoologie et de Botanique Africaines*, **34**(1): 74–97.

Laurent, R.F. 1941. Contribution à l'ostéologie et à la systématique des ranides africains. Deuxième note. *Revue de Zoologie et de Botanique Africaines*, **34**(2): 192–235.

Laurent, R.F. 1942. Note sur l'ostéologie des genres *Breviceps* et *Phrynomerus* (batraciens). *Revue de Zoologie et de Botanique Africaines*, **35**(4): 417–418.

Laurent, R.F. 1951. Sur la nécessité de supprimer la famille des Rhacophoridae mais de créer celle des Hyperoliidae. *Revue de Zoologie et de Botanique Africaines*, **45**: 116–122.

Laurent, R.F. 1961. Notes on some South African amphibians. *Publications de l'Université de l'État à Élisabethville*, **1**: 197–209.

Laurent, R.F. 1972a. Amphibiens. *Exploration du Parc National des Virunga*, (2)**22**: 1–125.

Laurent, R.F. 1972b. Review of 'The morphology, systematics and evolution of the Old World treefrogs (Rhacophoridae and Hyperoliidae)' by Liem, D.S. *Copeia*, **1972**: 198–201.

Laurent, R.F. 1973. The natural classification of the Arthroleptinae (Amphibia, Hyperoliidae). *Revue de Zoologie et de Botanique Africaines*, **87**: 666–678.

Laurent, R.F. 1980a. Esquisse d'une phylogenèse des anoures. *Bulletin de la Société Zoologique de France*, **104**: 397–422.

Laurent, R.F. 1980b. Géonémie des Anoures. *Comptes Rendus de la Société de Biogéographie*, **56**: 81–86.

Laurent, R.F. 1984. La phylogenèse des Ranoidea et le cladisme. *Alytes*, **3**: 97–101.

Laurent, R.F. 1986. Sous-classe des Lissamphibiens (Lissamphibia). Systématique. Pp. 594–797 *in* Grassé, P.-P. & Delsol, M. (Eds.), *Traité de zoologie*, vol. 14 (Batraciens), fasc. 1B. Masson, Paris.

Laurent, R.F. & Fabrezi, M. 1990. Further data on carpal structure in ranoid frogs. *Alytes*, **8**(2): 41–50.

Liem, D.S. 1970. The status of the Old World treefrogs. *Bulletin de Liaison Groupe Traveaux Amphibiens Africains*, **2**: 10–19.

Lynch, J.D. 1973. The transition from archaic to advanced frogs. Pp. 133–182 *in* Vial, J.L. (Ed.), *Evolutionary biology of the anurans*. 470 pp. University of Missouri Press, Columbia.

Noble, G.K. 1931. *The biology of the Amphibia*. xiii, 577 pp. McGraw-Hill, New York.

Ohler, A. & Kazadi, M. 1990. Description d'une nouvelle espèce du genre *Aubria* Boulenger, 1917 (Amphibiens, Anoures) et redescription du type d'*Aubria subsigillata* (A. Duméril, 1856). *Alytes*, **8**(2): 25–40.

Perret, J.-L. 1966. Les amphibiens du Cameroun. *Zoologische Jahrbücher. Abteilung für Systematik, Ökologie und Geographie der Tiere*, **93**(3): 289–464.

Perret, J.-L. 1976. Révision des amphibiens africains et principalement des types, conservés au Musée Bocage de Lisbonne. *Arquivos do Museo Bocage*, (2)**6**(2): 15–34.

Perret, J.-L. & Mertens, R. 1957. Étude d'une collection herpétologique faite au Cameroun de 1952 à 1955. *Bulletin de l'Institut Fondamental d'Afrique Noire*, (A)**19**: 548–601.

Peters, W. 1863. Mittheilungen über neue Batrachier. *Monatsberichte der Königlichen Preussischen Akademie der Wissenschaften zu Berlin*, **1863**: 445–470.

Poynton, J.C. 1964. The Amphibia of Southern Africa: a faunal study. *Annals of the Natal Museum*, **17**: 1–334.

Poynton, J.C. 1976. Classification and the Arthroleptinae (Amphibia). *Revue de Zoologie et de Botanique Africaines*, **90**: 215–220.

Poynton, J.C. & Broadley, D.G. 1985. Amphibia Zambesiaca. 2. Ranidae. *Annals of the Natal Museum*, **27**(1): 115–181.

Reichenow, A. 1874. Eine Sammlung Lurche und Kriechthiere von Westafrika. *Archiv für Naturgeschichte*, **40**(1.3): 287–298.

Savage, J.M. 1973. The geographic distribution of frogs: patterns and predictions. Pp. 351–445 *in* Vial, J.L. (Ed.), *Evolutionary biology of the anurans*. 470 pp. University of Missouri Press, Columbia.

Skelton-Bourgeois, M. 1961. Reptiles et batraciens d'Afrique orientale. *Revue de Zoologie et de Botanique Africaines*, **63**(3–4): 309–338.

Smith, A. 1838 1849. *Illustrations of the zoology of South Africa* ... Reptilia. 78 pls., text. Appendix, 28 pp. London.

Case 2895

Plesiosaurus rugosus Owen, 1840 (currently *Eretmosaurus rugosus*; Reptilia, Plesiosauria): proposed designation of a neotype

David S. Brown

Department of Oral Biology, The Dental School, Framlington Place, Newcastle upon Tyne NE2 4BW, U.K.

Nathalie Bardet

Laboratoire de Paléontologie des Vertébrés, Université Pierre et Marie Curie (Paris VI) URA 1761–CNRS — Case 106, 4 Place Jussieu, 75252 Paris, France

Abstract. The purpose of this application is to conserve the specific name of *Plesiosaurus rugosus* Owen, 1840 in accordance with its accustomed understanding and usage by the designation of a neotype. The specimen proposed (no. BMNH 14435 in the Natural History Museum, London) was described and figured by Owen in 1865. *P. rugosus* Owen, 1840 is the type species of *Eretmosaurus* Seeley, 1874.

---

1. *Plesiosaurus rugosus* Owen, 1840 (p. 82) was described from fossil vertebrae then in the museums of Bristol and York and in the private collection of Viscount Cole (later Earl of Enniskillen). None of the material was figured, nor were any catalogue numbers or measurements given.

2. Searches for Owen's syntypes were carried out for us at Bristol City Museum, the Yorkshire Museum in York and the Natural History Museum in London which holds the Enniskillen Collection. No specimens or any records pertaining to them could be traced in York or London. Records exist at Bristol of three syntype vertebrae (a cervical and two dorsals) from Aust Cliff, Gloucestershire, which were numbered Cb 2458 and which were destroyed by bombing on 24 November 1940. A brief description and a photograph of the specimens, mounted together with a humerus and femur of no association, were published by Swinton (1948, pp. 357–358, pl. 13). Swinton gave his opinion that the cervical '... is unsatisfactory for any diagnostic purpose, since it is incomplete, worn and smooth.' Dorsal vertebrae have never been considered diagnostic for any plesiosaur species.

3. The taxonomic characters used by Owen (1840) are sufficient only to identify his syntypes at subordinal level: rugosities on vertebral bodies develop ontogenetically; the presence of two cervical rib heads is a primitive character for all Plesiosauria; and the shape of articular faces and relative length of cervical vertebrae vary with ontogeny and with topographical position on the neck (for discussion of characters of plesiosaurian cervical vertebrae see Brown, 1981, pp. 329–330). Thus *Plesiosaurus rugosus* Owen, 1840 is a nomen dubium.

4. Owen in 1865 (pp. 34–40, pls. 14–15) described and figured an almost complete postcranial skeleton of a plesiosaur which he referred to *Plesiosaurus rugosus*,

believing it to belong to his (1840) nominal species. The specimen, from the 'Lower Lias of Leicestershire .. in the neighbourhood of Granby', is now in the Natural History Museum (catalogue number BMNH 14435).

5. Seeley (1874, p. 445) made *P. rugosus* Owen, 1840 the type species by monotypy of his new genus *Eretmosaurus*. His diagnosis gives characters shown by Owen's (1865) specimen and a detached pectoral girdle (BMNH 2041).

6. Lydekker (1889, pp. 249–250), when cataloguing BMNH 14435 as *Eretmosaurus rugosus* (Owen, 1840), stated that it did not appear absolutely certain that the vertebrae were identical with Owen's types, and concluded that '... the species must date from the description of the undermentioned skeleton' (i.e. from Owen, 1865).

7. *Eretmosaurus rugosus* (Owen, 1840) has been used as a valid name since 1874 although descriptions refer only to specimens BMNH 14435 and 2041. Diagnostic characters include the total number of cervical vertebrae and the structure of the pectoral girdle, which could not have been known from the syntypes. Owen's description of 1840 and the original syntypic series of isolated vertebrae, not diagnostic of a single species-group taxon, have remained forgotten in the primary literature since Lydekker's catalogue of 1889.

8. Although *P. rugosus* has been treated in the taxonomic sense of Owen (1865) it has generally been cited with the date 1840. To avoid confusion and nomenclatural instability we propose the designation of specimen number BMNH 14435 in the Department of Palaeontology of the Natural History Museum, London as the neotype of *Plesiosaurus rugosus* Owen, 1840.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type specimens for the nominal species *Plesiosaurus rugosus* Owen, 1840 and to designate specimen BMNH 14435 in the Natural History Museum, London as the neotype;

(2) to place on the Official List of Generic Names in Zoology the name *Eretmosaurus* Seeley, 1874 (gender: masculine), type species by monotypy *Plesiosaurus rugosus* Owen, 1840;

(3) to place on the Official List of Specific Names in Zoology the name *rugosus* Owen, 1840, as published in the binomen *Plesiosaurus rugosus* (specific name of the type species of *Eretmosaurus* Seeley, 1874) and as defined by the neotype designated in (1) above.

Acknowledgements

We thank Dr P.R. Crowther (*Bristol City Museum*), Mr P.C. Ensom (*The Yorkshire Museum, York*) and Dr A.C. Milner (*The Natural History Museum, London*) for searching for Owen's 1840 syntypes in their collections.

References

Brown, D.S. 1981. The English Upper Jurassic Plesiosauroidea (Reptilia) and a review of the phylogeny and classification of the Plesiosauria. *Bulletin of the British Museum (Natural History) (Geology)*, **35**(4): 253–347.

Lydekker, R. 1889. *Catalogue of the fossil Reptilia and Amphibia in the British Museum (Natural History). Part 2. Containing the orders Ichthyopterygia and Sauropterygia*. 307 pp. British Museum, London.

Owen, R. 1840. Report on British fossil reptiles. Part 1. *Reports of the British Association for the Advancement of Science*, **9**: 43–126.

Owen, R. 1865. Monograph of the fossil Reptilia of the Liassic Formations. Part 3(1). Sauropterygia. *Palaeontographical Society (Monographs)*, 1–40.

Seeley, H.G. 1874. Note on some generic modifications of the plesiosaurian pectoral arch. *Quarterly Journal of the Geological Society of London*, **30**: 436–449.

Swinton, W.E. 1948. Plesiosaurs in the City Museum, Bristol. *Proceedings of the Bristol Naturalist Society*, **27**(4): 343–360.

Case 2875

Coluber poecilogyrus Wied-Neuwied, [1824] (currently *Liophis poecilogyrus*) (Reptilia, Serpentes): proposed conservation of the specific name

Hobart M. Smith

Department of Environmental, Population and Organismic Biology, University of Colorado, Boulder, Colorado 80309–0334, U.S.A.

James R. Dixon

Department of Wildlife and Fisheries Sciences, Texas A & M University, College Station, Texas 77843, U.S.A.

Van Wallach

Department of Herpetology, Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts 02138, U.S.A.
Present address: *4 Potter Park, Cambridge, Massachusetts 02138, U.S.A.*

Abstract. The purpose of this application is the conservation of the widely used specific name of a South American snake, *Liophis poecilogyrus* (Wied-Neuwied, [1824]), by the suppression of the unused senior synonyms *Coluber m-nigrum* Raddi, 1820, *Coluber alternans* Lichtenstein, 1823 and *Natrix forsteri* Wagler in Spix, 1824.

---

1. The earliest name applied to the species now known as *Liophis poecilogyrus* (Wied-Neuwied, [1824], Heft 8, pl. [44]; for date see Woodward, 1915, p. 2315) is *Coluber m-nigrum* Raddi, 1820, as shown by Dixon (1989, p. 19) and Dixon & Markezich (1992, p. 133). Two female syntypes of *poecilogyrus* Wied-Neuwied [1824], from Rio Espirito Santo, Barra de Juca, Brazil, are located at the American Museum of Natural History, New York (Nos. 3593–94). Boulenger (1894, p. 131) correctly stated that Raddi's name was a senior synonym of Wied-Neuwied's but for unknown reasons still used the latter's name for the species, possibly because he interpreted Raddi's as incorrectly formed. All other publications in which *C. m-nigrum* appears (except for Dixon, 1989 and Dixon & Markezich, 1992) consider it to be a nomen dubium. As this name had not been used for over 170 years Dixon & Markezich (1992) rejected it in favour of *C. poecilogyrus*.

2. A second name, *Coluber alternans* Lichtenstein, 1823 (p. 104), which has similarly not been used since its original designation, has also been applied to *C. poecilogyrus*. Boulenger (1894) listed *C. alternans* as a doubtful senior synonym. Dixon & Markezich (1992) likewise rejected it, in spite of its priority, for the same reasons as for *C. m-nigrum*.

3. Dixon (1987, p. 174) concluded that *Natrix forsteri* Wagler in Spix, 1824 (p. 16, pl. 4, fig. 1) was a synonym of *L. poecilogyrus*. However, *N. forsteri* has never been accepted as valid as it has been regarded as a junior synonym of other specific names in *Natrix*.

4. A further synonym, *Coluber doliatus* Wied-Neuwied, 1825 appeared in the same work as *C. poecilogyrus* but as a junior primary homonym of *Coluber doliatus* Linnaeus, 1766 it is invalid.

5. The name *Liophis poecilogyrus* was accepted by Dixon & Markezich (1992) 'because of its usage in 52 primary articles as the valid name for the taxon'. This usage began as early as Wagler (1830, p. 188), who was also the first to use the now accepted combination *Liophis poecilogyrus*.

6. We consider that it is imperative in the interest of stability that the specific name *poecilogyrus* Wied-Neuwied, [1824] be maintained for the species to which it now applies. We have given the Commission Secretariat a list of ten works of the last 50 years which have used the binomen *L. poecilogyrus*; as examples we cite Parker (1931), Michaud & Dixon (1989), Pérez-Santos & Moreno (1991), Hofstadler (1992).

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the following specific names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
  (a) *m-nigrum* Raddi, 1820, as published in the binomen *Coluber m-nigrum*;
  (b) *alternans* Lichtenstein, 1823, as published in the binomen *Coluber alternans*;
  (c) *forsteri* Wagler in Spix, 1824, as published in the binomen *Natrix forsteri*;

(2) to place on the Official List of Specific Names in Zoology the name *poecilogyrus* Wied-Neuwied, [1824], as published in the binomen *Coluber poecilogyrus*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:
  (a) *m-nigrum* Raddi, 1820, as published in the binomen *Coluber m-nigrum* and as suppressed in (1)(a) above;
  (b) *alternans* Lichtenstein, 1823, as published in the binomen *Coluber alternans* and as suppressed in (1)(b) above;
  (c) *forsteri* Wagler in Spix, 1824 as published in the binomen *Natrix forsteri* and as suppressed in (1)(c) above.

References

Boulenger, G.A. 1894. *Catalogue of the snakes in the British Museum (Natural History)*, vol. 2. 382 pp. Taylor & Francis, London.

Dixon, J.R. 1987. Taxonomy and geographic variation of *Liophis typhlus* and related 'green' species of South America (Serpentes: Colubridae). *Annals of the Carnegie Museum*, **56**: 173–191.

Dixon, J.R. 1989. A key and checklist to the Neotropical snake genus *Liophis* with country lists and maps. *Smithsonian Herpetological Information Service*, **79**: 1–40.

Dixon, J.R. & Markezich, A.L. 1992. Taxonomy and geographic variation of *Liophis poecilogyrus* (Wied) from South America (Serpentes: Colubridae). *Texas Journal of Science*, **44**: 131–166.

Hofstadler, D.C. 1992. Nota sobre registro de copula heterloga em *Liophis* Wagler, 1830 (Serpentes). *Acta Biologica Leopold*, **14**(1): 83–86.

Lichtenstein, H. 1823. *Verzeichniss der Doubletten des zoologischen Museums der Königl. Universität zu Berlin nebst Beschreibung vieler bisher unbekannten Arten von Säugethieren, Vögeln, Amphibien und Fischen*. 118 pp. Trautwein, Berlin.

Linnaeus, C. 1766. *Systema naturae ...*, Ed. 12, vol. 1, part 1. Pp. 1–532. Salvii, Stockholmiae.

Michaud, E.J. & Dixon, J.R. 1989. Prey items of 20 species of the neotropical colubrid snake genus *Liophis*. *Herpetological Review*, **20**(2): 39–41.

Parker, H.M. 1931. Reports on an expedition to Brazil and Paraguay in 1926–7. Amphibia–Reptilia. *Journal of the Linnean Society of London. Zoology*, **37**: 285–289.

Pérez-Santos, C. & Moreno, A.G. 1991. Serpientes de Ecuador. *Museo Regionale di Scienze Naturali*, Torino, **11**: 1–538.

Raddi, G. 1820. Die alcune species nuove di rettili e plante Brasilien. *Atti della Società Italiana di Scienze Naturali di Modena*, **18**: 1–39.

Spix, J.B. von. 1824. *Serpentum Brasiliensium species novae ...* 75 pp. Hübschmanni, Monachii.

Wagler, J.G. 1830. *Natürliches System der Amphibien, mit vorangehender Classification der Säugethiere und Vögel*. 354 pp. 9 pls. München, Stuttgart & Tübingen.

Wied-Neuwied, M.A.P. von. [1824]. *Abbildungen zur Naturgeschichte Brasiliens*, Hefts 5–8, pls. 25–48. Landes-Industrie-Comptoirs, Weimar.

Wied-Neuwied, M.A.P. von. 1825. *Beiträge zur Naturgeschichte von Brasilien*, vol. 1. 614 pp. Landes-Industrie-Comptoirs, Weimar.

Woodward, B.B. 1915. *Catalogue of the books, manuscripts, maps and drawings in the British Museum (Natural History)*, vol. 5. Pp. 1957–2403. British Museum, London.

Case 2856

Psittacus banksii Latham, 1790 and *P. lathami* Temminck, 1807 (currently *Calyptorhynchus banksii* and *C. lathami*; Aves, Psittaciformes): proposed conservation of the specific names

Richard Schodde

Australian National Wildlife Collection, CSIRO, Division of Wildlife and Ecology, P.O. Box 84, Lyneham, A.C.T. 2602, Australia

Walter J. Bock

Department of Biological Sciences, Columbia University, New York, NY 10027, U.S.A.

Abstract. The purpose of this application is the conservation of the specific names of both the Australian Glossy Black Cockatoo, which has the universally accepted name *Calyptorhynchus lathami* (Temminck, 1807), and the Australian Red-tailed Black Cockatoo *Calyptorhynchus banksii* (Latham, 1790). In recent years *C. banksii* has commonly been called *C. magnificus* (Shaw in Shaw & Nodder, 1790). Shaw's name actually applies to the Glossy Black Cockatoo, *C. lathami* (Temminck, 1807). *C. lathami* is threatened not only by *Psittacus magnificus* Shaw in Shaw & Nodder, 1790 but also by *P. banksi flavicollo* Kerr, 1792, an unused senior synonym. It is proposed that confusion will be avoided by the suppression of the specific names *magnificus* and *flavicollo*, so that the Red-tailed and Glossy Black Cockatoos are validly named *C. banksii* and *C. lathami* respectively.

---

1. The two large Australian black cockatoos possessing red patches in the tail have long been known as *Calyptorhynchus banksii* (Latham, 1790), the Red-tailed Black Cockatoo and *C. lathami* (Temminck, 1807), the Glossy Black Cockatoo. Unfortunately these names acquired a tangled nomenclatural history from 1927 when Mathews (1927, p. 223) concluded that *Psittacus magnificus* Shaw in Shaw & Nodder, 1790 applied to the Red-tailed Black Cockatoo and had priority over *P. banksii* Latham, 1790. Nevertheless, the specific name *banksii* Latham, 1790 maintained general currency in the Australian literature until the late 1960's because of its use in the *Official checklist of the birds of Australia* (R.A.O.U., 1926), which was not finally superseded until 1975.

2. The specific name of *P. banksii* Latham, 1790 (p. 107) is based on a female Red-tailed Black Cockatoo collected by Joseph Banks's party on the Endeavour River during James Cook's first voyage to Australia (see Parkinson, 1773, p. 144, pl. 10; Sharpe, 1906, p. 173 and Whittell, 1954, pl. 2). This specimen may be the female acquired by the Natural History Museum in Vienna from the sale of the Leverian Museum (sale catalogue no. 311; see Pelzeln, 1873, p. 33). The identification of the specimen BM(NH) 1863.7.7.53 in the Natural History Museum, London, as the 'type' of *banksii* by Salvadori (1891, p. 110) was rejected by Warren (1966, p. 29).

3. The specific name of *Calyptorhynchus magnificus* (Shaw in Shaw & Nodder, 1790, pl. 50), now in general use for the Red-tailed Black Cockatoo, actually applies according to its original description and plate to a different species, the Glossy Black Cockatoo *C. lathami* (Temminck, 1807, p. 21). Nodder's figure of *Psittacus magnificus* accompanying Shaw's description has a bulbous horn-brown maxilla, a discrete yellowish red band in the tail, ochreish feathers on the cheeks and head, and ochreish bars restricted to the belly on the ventral surface. These traits are consistent with a young female Glossy Black Cockatoo, not with a Red-tailed Black Cockatoo. Shaw and Nodder's material of *P. magnificus* was evidently obtained through Surgeon-General John White of the First Fleet at Port Jackson (i.e. Sydney; see Lysaght, 1956, p. 273) within the range of the Glossy Black Cockatoo. Records of the Red-tailed Black Cockatoo have never been confirmed so far south on the east Australian coast. White's material passed to the Leverian Museum and was lost following disposal of that museum (see Sharpe, 1906 and Mullens, 1916).

4. The Glossy Black Cockatoo has been known universally as *Calyptorhynchus lathami* for over 70 years, ever since Mathews (1917, p. 125) concluded that *Psittacus lathami* Temminck, 1807 was the earliest name for this species. The adult male holotype, in the Nationaal Natuurhistorisch Museum, Leiden, is of this species. However, *P. lathami* Temminck, 1807 was preceded not only by *P. magnificus* Shaw in Shaw & Nodder, 1790 (para. 3 above) but also by *P. banksi flavicollo* Kerr, 1792 (p. 586), which is unused. The description of *P. banksi flavicollo* was based on *P. banksii* var. β in Latham, 1790 (p. 107), which is the Glossy Black Cockatoo. This was appreciated by Salvadori (1891, p. 112), but most workers (e.g. Condon, 1975) have followed Mathews (1917, pp. 100, 104) in interpreting *P. banksi flavicollo* Kerr, 1792 as a junior synonym of *P. magnificus* Shaw in Shaw & Nodder, 1790 (= *P. banksii* Latham, 1790), the Red-tailed Black Cockatoo. Kerr's name has never been used as valid for any taxon of black cockatoos and the type material is evidently lost.

5. The Standing Committee on Ornithological Nomenclature (SCON) of the International Ornithological Congress reviewed the history of these names at its meeting in Christchurch, New Zealand in December 1990. It concluded, to avoid nomenclatural confusion and instability as well as taxonomic and geographic uncertainty, that the names *Psittacus magnificus* Shaw in Shaw & Nodder, 1790 and *P. banksi flavicollo* Kerr, 1792 should be suppressed, and that both *P. banksii* Latham, 1790 and *P. lathami* Temminck, 1807 should be conserved.

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the following specific names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
   (a) *magnificus* Shaw in Shaw & Nodder, 1790, as published in the binomen *Psittacus magnificus*;
   (b) *flavicollo* Kerr, 1792, as published in the trinomen *Psittacus banksi flavicollo*;

(2) to place on the Official List of Specific Names in Zoology the following names:
   (a) *banksii* Latham, 1790, as published in the binomen *Psittacus banksii*;
   (b) *lathami* Temminck, 1807, as published in the binomen *Psittacus lathami*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:

(a) *magnificus* Shaw in Shaw & Nodder, 1790, as published in the binomen *Psittacus magnificus* and as suppressed in (1)(a) above;

(b) *flavicollo* Kerr, 1792, as published in the trinomen *Psittacus banksi flavicollo* and as suppressed in (1)(b) above.

References

Condon, H.T. 1975. *Checklist of the birds of Australia*, part 1 (Non-Passerines). xx, 311 pp. Royal Australasian Ornithologists Union, Melbourne.

Kerr, R. 1792. *The animal kingdom, or zoological system of the celebrated Sir C. Linnaeus*, Class 1 (Mammalia), Class 2 (Birds). 644 pp. Murray & Faulder, London.

Latham, J. 1790. *Index Ornithologicus, sive systema ornithologiae* ..., vol. 1. 466 pp. Leigh & Sotherby, London.

Lysaght, A. 1956. Some eighteenth century bird paintings in the library of Sir Joseph Banks (1743–1820). *Bulletin of the British Museum (Natural History).(Historical Series)*, **1**: 253–371.

Mathews, G.M. 1917. *The birds of Australia*, vol. 6. xix, 516 pp. Witherby, London.

Mathews, G.M. 1927. Points of nomenclature. *Emu*, **26**: 222–224.

Mullens, W.H. 1916. Some museums of old London. 1. The Leverian Museum. *Museums Journal*, **15**: 123–129.

Parkinson, S. 1773. *A journal of a voyage to the South Seas in His Majesty's ship the* Endeavour. xxiii, 22, 212 pp., 27 pls. Parkinson, London

Pelzeln, A. von. 1873. On the birds in the Imperial Collection at Vienna obtained from the Leverian Museum. *Ibis*, (3)**3**: 14–54.

Royal Australasian Ornithologists' Union. 1926. *Official checklist of the birds of Australia*. Ed. 2. x, 212 pp. RAOU, Melbourne.

Salvadori, T.A. 1891. *Catalogue of the birds in the British Museum*, vol. 20 (Psittaci). xvii, 658 pp., 18 pls. British Museum, London.

Sharpe, R.B. 1906. *The history of the collections contained in the natural history departments of the British Museum*, vol. 2, part 3. Pp. 79–515. British Museum (Natural History), London.

Shaw, G. & Nodder, F.P. 1790. *The naturalist's miscellany*, vol. 2. 74 pls. with text. Nodder, London.

Temminck, C.J. 1807. *Catalogue systématique du Cabinet d'Ornithologie et de la collection de Quadrumanes de Crd. Jb. Temminck*. 270 pp. Sepp Janz, Amsterdam.

Warren, R.L.M. 1966. *Type-specimens of birds in the British Museum (Natural History)*, vol. 1, (Non-passerines). ix, 320 pp. British Museum (Natural History), London.

Whittell, H.M. 1954. *The literature of Australian birds: a history and bibliography of Australian ornithology*. xi, 788 pp., 32 pls. Paterson Brokensha, Perth.

Comment on the proposed conservation of the specific name of *Doris grandiflora* Rapp, 1827 (currently *Dendrodoris grandiflora*; Mollusca, Gastropoda)
(Case 2886; see BZN **51**: 7–9)

Richard C. Willan
Museum and Art Gallery of the Northern Territory, G.P.O. Box 4646, Darwin, Northern Territory 0810, Australia

Robert Burn
3 Nantes Street, Newtown, Geelong, Victoria 3220, Australia

In supporting the proposal by Ortea & Valdés to conserve the specific name of the Mediterranean dendrodorid nudibranch *Doris grandiflora* Rapp, 1827 over that of its senior subjective synonym *Doris guttata* Risso, 1826, we acknowledge that *grandiflora* has gained universal acceptance. This is demonstrated by its usage not only in all of the specialist taxonomic and biochemical literature, but importantly also in both the definitive modern regional guides (Schmekel & Portmann, 1982; Cattaneo-Vietti, Chemello & Giannuzzi-Savelli, 1990).

Furthermore, we wish to point out that if *Dendrodoris guttata* (Risso, 1826) were treated as a valid name it would be a senior secondary homonym of *Doridopsis guttata* Odhner, 1917. *Doridopsis* is a junior subjective synonym of *Dendrodoris*.

Dendrodoris guttata (Odhner) is a very distinctive species (one of the few Indo-Pacific species to be readily identifiable) that occurs in Japan and throughout the northern half of Australia from Coffs Harbour in northern New South Wales, across the entire northern coast, to Warroora in central Western Australia. It is included in two of the guides to the Australian nudibranch fauna (Willan & Coleman, 1984; Coleman, 1990). Crucially, there are no junior synonyms, so a new name would need to be created if *guttata* Risso, 1826 were to replace *grandiflora* Rapp, 1827 in *Dendrodoris*. We have supplied the Commission Secretariat with a list of 11 works that indicate the acceptance of the name *Dendrodoris guttata* (Odhner, 1917) in Australian and Japanese technical and popular literature.

Additional references

Coleman, N. 1990. *Nudibranchs of the South Pacific*, vol. 1. 64 pp. Neville Coleman's Sea Resource Centre, Springwood, Queensland.

Odhner, N.H. 1917. Results of Dr E. Mjöberg's Swedish Scientific Expeditions to Australia 1910–1913. XVII. Mollusca. *Kungliga Svenska Vetenskaps Akademiens Handligar*, **52**(19): 1–115.

Willan, R.C. & Coleman, N. 1984. *Nudibranchs of Australasia*. 56 pp. Australasian Marine Photographic Index, Sydney.

Comment on the proposed conservation as the correct spelling of *Cryptophagus* Herbst, 1792, *Dorcatoma* Herbst, 1792, *Rhizophagus* Herbst, 1793 and *Colon* Herbst, 1797 and the proposed conservation of *Lyctus bipustulatus* Fabricius, 1792 as the type species of *Rhizophagus* (Insecta, Coleoptera)
(Case 2783; see BZN **51**: 21–24)

R.G. Booth

International Institute of Entomology, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.

I would like to add my support for this case. Several species of *Cryptophagus* occur as pests in stored products in northern temperate regions, and the name is well used in the economic literature. The RHIZOPHAGIDAE are a small but well defined family of worldwide distribution. One species of *Rhizophagus* has been used as a biological control agent of an important forestry pest in the U.K. (King, C.J. & Fielding, N.J. 1989. *Bulletin of the Forestry Commission*, London, **85**, 1–11).

Although Silfverberg quotes Illiger (1801) and Paykull (1800) as the first users of *Colon* and *Cryptophagus* respectively, both names appear in the index of Herbst's own work (Herbst, 1799, *Natursystem* ..., part 8, p. 395). As the names appear in the correct alphabetic order, Herbst's change from K... to C... must have been deliberate.

Similarly, *Dorcatoma* was used by Paykull ([1798], *Fauna Svecica* (Insecta), vol. 1, p. 318) before Fabricius (1801). However, close inspection of Herbst (1792, pp. 103–105) reveals an interesting variant in spelling. While *Dorkatoma* was used as a heading on pages 103, 104 and 105, the diagnosis (p. 104) of '1. Dorkatoma Dresdensis' reads 'Mus. Herbst. Dorc. atra, glabra, antennis pedibusque piceis.'. 'Dorc.' can be accepted either as an abbreviation for *Dorcatoma* or as a typographical error. It was common practice to use the generic name or its abbreviation at the start of a latin diagnosis of a species name, and Herbst used abbreviations throughout the work in question. The application to conserve *Dorcatoma* as the original spelling may be unnecessary if the Commission accepts that *Dorcatoma*, as appearing in the abbreviation 'Dorc.' in the diagnosis, is a valid alternative original spelling to *Dorkatoma*.

Comment on the proposed conservation of ELMIDAE Curtis, 1830 as the correct spelling and of the feminine gender of *Elmis* Latreille, 1802 (Insecta, Coleoptera) (Case 2861; see BZN **51**: 25–27)

G.N. Foster

Honorary Secretary, The Balfour-Browne Club, 3 Eglinton Terrace, Ayr KA7 1JJ, Scotland, U.K.

I wish to support Dr Manfred Jäch's proposal to conserve ELMIDAE as the correct spelling of the riffle beetle family name, at the same time retaining the feminine gender of the name *Elmis*. The riffle beetles are an important, worldwide group of beetles often cited as indicators of water quality by limnologists. The proposal to use the name ELMIDIDAE has not received much support; I am only aware of the two Swedish papers cited by Jäch. Names such as HELMIDAE and ELMINTHIDAE, both apparently unavailable, have occasionally been used in ecological literature, resulting in potential confusion. Removal of this uncertainty will be beneficial to all those involved in the study of water beetles.

Comments on the proposed designation of the type species of *Hydrophoria* Robineau-Desvoidy, 1830 (Insecta, Diptera)
(Case 2858; see BZN **51**: 28–30)

(1) Curtis W. Sabrosky
205 Medford Leas, Medford, New Jersey 08055, U.S.A.

In the past few years I have been finalizing a catalogue of family-group names and their type genera in the order Diptera, and the unsettled status of *Hydrophoria* has been duly recorded. The application covers the same ground, and I can only add a few details while supporting and applauding the proposal.

Another invalid designation in the confused history was that of Rondani (1856, p. 94) who designated *Musca pagana* Fabricius, 1794, not an originally included nominal species, and now a synonym of *Mydaea corni* (Scopoli, 1763) (*Musca*) in the MUSCIDAE.

Rondani (1866, p. 72; see para. 4 of the application) actually designated '*Musca conica* Fall.' (repeated by Rondani, 1877, p. 12), but on a later page he called it *Anthomyia conica* Wiedemann.

The application (para. 3) mentions a type designation by Coquillett (1910). An earlier Coquillett designation (1901, p. 143) was *Musca socia* Fallén, 1825, not originally included, with the Robineau-Desvoidy species *Hydrophoria tibialis* and *H. sagittaria* in its synonymy. These two were originally included, but the designation did not precisely fix one of them as type species.

The family-group name Hydrophoriti Lioy, 1864 was based on *Hydrophoria*; although it may not be widely accepted by specialists it has been used as HYDROPHORIINI (e.g. by Fan et al., 1986, *Economic Insect Fauna of China*, fasc. 37 (Diptera: Anthomyiidae, p. 38)).

Additional references

Coquillett, D.W. 1901. Types of anthomyid genera. *Journal of the New York Entomological Society*, **9**: 134–146.

Lioy, P. 1864. I ditteri distribuiti secondo un nuovo metodo di classificazione naturale. *Atti dell' I.R. Istituto Veneto di Scienze, Lettere ed Arti*, (3) **9**: 719–771 (Cont.).

Rondani, C. 1856. *Dipterologiae Italicae Prodromus*, vol. 1. 228 pp.

Rondani, C. 1877. *Species Italicae ordinis dipterorum ordinatim dispositae, ... Pars quinta. Stirps XVII — Anthomyinae*. 304 pp. Parma.

(2) Roger W. Crosskey
c/o Department of Entomology, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.

As a dipterist I wholly support, in principle, Griffiths's application to settle this long-vexed question. Unfortunately, however, he asks the Commission to act in a void inasmuch as he has left entirely uncovered the type situation for *Musca lancifer* Harris, [1780]. The Moses Harris collection has long been considered destroyed, and as Pont & Michelsen (1982) wrote — in the work in which they established junior synonymy of *Hydrophoria conica* (Wiedemann) with *lancifer* — 'it seems inconceivable that it can still be in existence'. This being so, which species precisely will the

Commission be designating if it accedes to Griffiths's request? For such nondescript flies as ANTHOMYIIDAE the ancient illustrations of Harris are hardly up to the needs of modern taxonomy, and Pont & Michelsen themselves seem not to have been overly convinced that *lancifer* should be treated as a senior synonym of *conica*, writing 'We think that this [*lancifer*] is most probably *Hydrophoria conica* ...'. In such woolly circumstances it is unhelpful (in fact most unwise) of Griffiths to ignore the type specimen situation. There is clearly need here, while the type species muddle is sorted, for a neotype to be designated for *lancifer* Harris: only this will ensure proper understanding of the species concerned and make for the needed future stability. The Commission's approval of the designation of *lancifer* Harris as type species of *Hydrophoria* should be contingent upon revision of the case so that it deals with this important point. A neotype specimen should be designated and such designation (part-and-parcel of the application) approved by Commission action. A suitably selected neotype would uphold the synonymy of *conica* with *lancifer* that has begun to be accepted over the past few years. (A type specimen probably exists for *conica* Wiedemann, and evidence could helpfully be presented simultaneously that this is conspecific with the *lancifer* neotype: the specific names should then both go on the appropriate list). I recommend that the Commission rejects the application as formulated, but acts as Griffiths suggests once the type specimen question has been properly presented.

Comments on the proposed conservation of *Sicus* Scopoli, 1763 and *Myopa* Fabricius, 1775 by the designation of *Conops buccata* Linnaeus, 1758 as the type species of *Myopa* (Insecta, Diptera), and on the proposed rejection of *Coenomyia* Latreille, 1796
(Case 2881; see BZN **51**: 31–34)

(1) Curtis W. Sabrosky
205 Medford Leas, Medford, New Jersey 08055, U.S.A.

I support and applaud the application to resolve the difficulty concerning *Sicus* Scopoli, 1763 and *Myopa* Fabricius, 1775. This is a useful clarification of confusion in the family CONOPIDAE.

The type species of *Sicus* is widely accepted as *Conops ferruginea* Linnaeus, 1761 but an objective examination could lead to another conclusion. *Sicus* was based on two nominal species, *S. ferrugineus* and *S. buccatus*. There is no problem with the authorship of the second species, under which was cited reference to *C. buccata* Linnaeus, 1758; the latter has long been accepted as the type species of *Myopa* Fabricius, 1775. However, there is no citation under *S. ferrugineus*, and to all appearances this is a new species *S. ferrugineus* Scopoli, 1763, rather than a simple oversight of a citation. Nevertheless, almost all authors have regularly interpreted this *ferrugineus* as *Conops ferruginea* Linnaeus, 1761 and have cited the Linnaean nominal species as the type species of *Sicus* (see, for example, Coquillett, 1910, and the three modern regional catalogs of Camras, 1965, Smith, 1975, p. 384 and Majer, 1988, p. 32, where there is no mention of *ferrugineus* Scopoli; para. 1 of the application). Bezzi (1907, p. 271) listed Scopoli's species, although as a synonym of

ferrugineus Linnaeus. The descriptions of *ferrugineus* in Scopoli and Linnaeus are slightly but not impossibly different. If the Scopoli species were considered to be *S. ferrugineus* Scopoli, this could be designated as the type species of *Sicus* and then recognized as a junior synonym (and a junior secondary homonym) of *C. ferrugineus* Linnaeus.

The name *Coenomyia* Latreille, 1796 has no place in the *Sicus-Myopa* problem in the CONOPIDAE. It is part of the confusion arising from the usage of the name *Sicus* in three different families of Diptera (para. 6 of the application). *Coenomyia* is an important name in its own right and should not be rejected (cf. paras. 4 and 6 of the application). The '*Sicus ferrugineus* F.' referred to by Latreille (1802), which is the type species of *Coenomyia* by subsequent monotypy, was *Musca ferruginea* Scopoli, 1763 (cf. James, 1965, p. 296; Webb, 1983, pp. 653–664; Majer, 1988, p. 32; Thompson & Pont, 1993, p. 75). *Coenomyia ferruginea* (Scopoli) has a widespread Holarctic distribution. It was long placed in its own family COENOMYIIDAE, but has been combined recently with the XYLOPHAGIDAE.

A type designation for *Sicus* Fabricius, 1798 (said in para. 6 of the application to be unknown) was made by myself (Sabrosky, 1961; BZN **18**: 228) in a report on Meigen's (1800) work. The type is *Musca ferruginea* Scopoli, 1763, rendering *Sicus* Fabricius a junior objective synonym of *Coenomyia* Latreille, as well as being a junior homonym of *Sicus* Scopoli.

Additional references

Bezzi, M. 1907. Conopidae. *In* Becker, T. et al. (Eds.), *Katalog der paläarktischen Dipteren*, vol. 3. 828 pp.

James, M.T. 1965. Family Xylophagidae. Pp. 296–298 *in* Stone, A. et al. (Eds.), *A catalog of the Diptera of America north of Mexico*. Agricultural Handbook No. 276. iv, 1696 pp. United States Department of Agriculture, Washington.

Majer, J. 1988. Family Coenomyiidae. Pp. 31–34 *in* Soós, A. & Papp, L. (Eds.), *Catalogue of Palaearctic Diptera*, vol. 5. 446 pp. Elsevier, Amsterdam.

Smith, K.G.V. 1975. Family Conopidae. Pp. 375–386 *in* Delfinado, M.D. & Hardy, D.E. (Eds.), *A catalog of the Diptera of the Oriental Region*, vol. 2. 459 pp. University Press of Hawaii, Honolulu.

Thompson, F.C. & Pont, A.C. 1993. *Systematic database of* Musca *names*. 219, 2 pp. Koeltz Scientific Books, Koenigstein.

Webb, D.W. 1983. The genus *Coenomyia* (Diptera: Coenomyiidae) in the Nearctic Region and notes on generic placement. *Proceedings of the Entomological Society of Washington*, **85**: 653–664.

(2) Terry A. Wheeler
Department of Environmental Biology, University of Guelph, Guelph, Ontario, Canada N1G 2W1

I support the application by Camras for the conservation of *Myopa* Fabricius, 1775 and *Sicus* Scopoli, 1763 as currently recognized. However, I disagree with the proposal to place *Coenomyia* Latreille, 1796 on the Official Index as a junior objective synonym of *Sicus* Scopoli, 1763. *Coenomyia* is currently in widespread use and is the type genus of the family COENOMYIIDAE; rejection of the generic name would cause unnecessary confusion in the nomenclature of the Diptera. The proposal is based on the erroneous assumption that *Coenomyia* and *Sicus* Scopoli have the same type species.

Scopoli (1763) described *Sicus ferrugineus* (species no. 1004), which is now treated as a synonym of *Conops ferruginea* Linnaeus, 1761, as noted in para. 1 of the application. However, it is another species described in the same publication, *Musca ferruginea* Scopoli, 1763 (p. 349, species no. 913), which has been treated by subsequent authors as the type species of *Coenomyia*.

Sicus ferrugineus was one of two species originally assigned to *Sicus* by Scopoli (1763). Although Scopoli did not attribute authorship of *S. ferrugineus* to Linnaeus, Fabricius (1775, p. 159) listed both *S. ferrugineus* Scopoli and *Conops ferruginea* Linnaeus, 1761 as synonyms of *Myopa ferrugineus*. Most authors subsequent to Fabricius considered *Conops ferruginea* Linnaeus, 1761, *Sicus ferrugineus* of Scopoli (1763) and *Myopa ferrugineus* of Fabricius (1775) as conspecific and attributed authorship of the specific name to either Linnaeus or Fabricius (see Sabrosky's comment above). Coquillett's (1910) designation of *Conops ferruginea* Linnaeus, 1761 as the type species of *Sicus* Scopoli has been accepted by subsequent authors.

The name *Coenomyia* Latreille, 1796 was proposed without included species. Later, Latreille (1802, p. 439) listed the single species *Sicus ferruginea* 'F.' (i.e. Fabricius) in the genus, which he assigned to the TABANIDAE. Latreille (1802, p. 444) assigned the genus *Myopa* (with *Sicus* Scopoli as a synonym) to the family CONOPIDAE and (p. 445) listed *Myopa ferruginea* 'F.' as the only species. Latreille (1810, p. 442) subsequently designated *Sicus ferrugineus* Fabricius as the type species of *Coenomyia*, and (p. 444) *Myopa ferruginea* Fabricius as the type species of *Myopa*. It is evident from Latreille's placement of *Sicus ferrugineus* Fabricius and *Myopa ferruginea* Fabricius in different families that he considered them different species. Fabricius (1805) also assigned the two species to different families, placing (p. 75) the genus *Sicus* (containing *Sicus ferrugineus*) between the genera *Atherix* and *Stratiomys*, and (p. 178) *Myopa* (containing *Myopa ferruginea*) directly after the genus *Conops*. Fabricius's placement of *Sicus* in his taxonomic list of genera corresponds roughly to the current placement of *Coenomyia*.

Most authors (see, for example, Lindner, 1925; Leonard, 1930; Oldroyd, 1966; Webb, 1983) have recognised *Musca ferruginea* Scopoli, 1763 as the type species of *Coenomyia* and included *Sicus ferrugineus* Fabricius, 1798 as a synonym of Scopoli's name.

It seems certain, therefore, that the *Sicus ferrugineus* Fabricius of Latreille (1802, 1810) and Fabricius (1805) is conspecific with *Musca ferruginea* Scopoli, 1763 and that the species is not conspecific with *Conops ferruginea* Linnaeus, 1761. *Musca ferruginea* Scopoli is widely considered the type species of *Ceonomyia* and there is no justification for treating *Coenomyia* as a junior objective synonym of *Sicus* Scopoli, 1763.

Additional references

Fabricius, J.C. 1805. *Systema antliatorum secundum ordines, genera, species, adiectis synonymis, locis, observationibus, descriptionibus*. 372 pp. Reichard, Brunsvigae.

Leonard, M.D. 1930. A revision of the dipterous family Rhagionidae (Leptidae) in the United States and Canada. *Memoirs of the American Entomological Society*, **7**: 1–181.

Lindner, E. 1925. Rhagionidae. *In* Lindner, E. (Ed.), *Die Fliegen der Palaearktischen Region*, vol. 4, part 1. 49 pp.

Oldroyd, H. 1966. Notes on *Coenomyia* Latreille (Diptera: Coenomyiidae). *Beiträge zur Entomologie*, **16**: 953–963.

Comments on the proposed conservation of the specific name of *Cliola* (*Hybopsis*) *topeka* Gilbert, 1884 (currently *Notropis topeka*) (Osteichthyes, Cypriniformes)
(Case 2808; see BZN **49**: 268–270; **50**: 144, 287–289)

(1) Richard L. Mayden
Department of Biological Sciences, University of Alabama, Tuscaloosa, Alabama 35487–0344, U.S.A.

I read with great interest the reply (BZN **50**: 289) by Drs Frank B. Cross & Joseph T. Collins to my previous comment co-authored with Dr Carter R. Gilbert (BZN **50**: 287–288). I consider that it is both inaccurate and inappropriate with regard to the nomenclatural change we (Mayden & Gilbert, 1989) proposed for *Notropis topeka* to *N. tristis*.

Cross & Collins criticize the Girard (1856) description of *Notropis tristis* as being inaccurate and poor. They regard this description as such because it 'has not enabled assignment of the name to any known taxon without reference to the type material'. This is neither a fair assessment of Girard's research nor the information provided in the description. They state that 'There are several species to which Girard's description might apply ...'. This is also incorrect. There are few species that are found in the region where Girard conducted his research that are consistent with the description. The description is much better than that for many species that we accept today as valid and have no extant types.

Cross & Collins use the argument of *Notropis tristis* being considered for listing by the U.S. Fish and Wildlife Service as a 'Category One' species in need of further study and protection. This is also a very weak argument and one without substance. The nomenclatural change from *Notropis topeka* to *N. tristis* has already been accepted by the Fish and Wildlife Service. The list of candidate species for federal protection lists the species as *N. tristis*, not *N. topeka*!

I believe that the arguments provided by Cross & Collins in their application and in their subsequent comment are without scientific merit and reflect a personal bias towards a local name for the species. While it may be nice to accommodate personal preferences on such issues it is clear that the rules of zoological nomenclature were established to eliminate such foolishness.

(2) Reeve M. Bailey
Division of Fishes, Museum of Zoology, The University of Michigan, Ann Arbor, Michigan 48109, U.S.A.

The date for Girard's name *Moniana tristis* is given as 1857 in the application by Drs F.B. Cross & J.T. Collins. Since about 23 genera and 133 new species were described in Girard's work accurate dating is important. Although 1857 is often used, 1856 is more common and is correct.

Girard's paper was published in the *Proceedings of the Academy of Natural Sciences of Philadelphia*, vol. 8, pp. 165–213 in 1857 and was recorded (1913) with this date in the 'Index to the scientific contents of the Journal and Proceedings of the Academy ... 1812-1912'. However, an entry (p. 1) in the 'Correspondence-1857'

section of the *Proceedings*, vol. 9 (1858) certifies receipt of '*Proceedings*, vol. viii, No. 5' (Girard's paper) by the Trustees of the New York State Library on or before 27 December 1856. Thus, Girard's paper was issued sometime between the date of acceptance, 30 September (*Proceedings*, vol. 8, p. 163) and 27 December 1856. It was the practice of the Academy to publish and distribute parts of the *Proceedings* when printed, with the title page of the volume showing the date when the volume was to be assembled (1857 for vol. 8 of 1856). The situation is further complicated since Girard's paper, with slightly changed title (the words 'of America' are lacking) and different pagination (pp. 1–54), was issued as an offprint in September 1856. The (1913) 'Index ... 1812-1912' (p. vii) noted 'The issue to authors of separate copies of papers from the *Proceedings* antedates the publication of the numbers of which they form a part, the record being printed on the covers of the separata but not otherwise preserved'. The type bed in the volume and the separate were the same; the separate had a terminal four pages of a list of species and an index (pp. 51–54).

I have been aware of the application to conserve the specific name of *Notropis topeka* (Gilbert, 1884) since its inception. In fact, I intended to request the conservation of this name myself until I learned that Drs Cross and Collins were doing so. I therefore support with enthusiasm the proposed conservation of the name for the familiar cyprinid fish of north-central United States.

Identification of the two located syntypes of *Moniana tristis* Girard, 1856 with two well-marked species, *Lythrurus* (or *Notropis*) *umbratilis* Girard, 1856 and *Notropis topeka* (see Mayden, 1987, Mayden & Gilbert, 1989 and paras. 3 and 4 of the application) emphasizes the inadequacy of Girard's original description, which C.R. Gilbert (1978, p. 84), following others, ranked as not definitely identifiable. It is difficult to rationalize the observation by Mayden & Gilbert (BZN **50**: 287, para. 4; see above also) that Girard's description 'was good according to the standards at the time'.

As Cross & Collins have shown, the consistent and unquestioned use of *Notropis topeka* during this century has served scientific communication well. In their opposition to the application, Mayden & Gilbert defend their (unnecessary) selection of a lectotype for *Moniana tristis* that dictates replacement of *topeka*. They do not address the issue of conservation of the latter name but defend nomenclatural priority with spirit. In so doing they overlook evidence that the Commission is not blind to the fundamental importance of stability (see Article 23b of the Code). Recommendation 24A comments on the action of first reviser (which could have been exercised in this case; see paras. 3 and 4 of the application): 'An author should choose the name, homonym, spelling, or nomenclatural act that will best serve stability and universality of nomenclature'. Mayden & Gilbert (1989) disregarded this exhortation and then (BZN **50**: 288, para. 7) challenged the 'scientific integrity' of a choice that could have avoided a name change.

I have discussed Cross & Collins's application, the previous comments and this statement with four local ichthyological colleagues, William L. Fink, William A. Gosline, Robert Rush Miller and Gerald R. Smith. They agree with me that the three actions proposed in para. 6 of the application will contribute substantially to nomenclatural stability, and we strongly endorse them. Approval from these colleagues indicates that support is not only regional (Kansas), as suggested by Kuhajda (BZN **50**: 289) and Mayden (above).

Comment on the proposed conservation of HEMIDACTYLIINI Hallowell, 1856 (Amphibia, Caudata)
(Case 2869; see BZN **50**: 129–132; **51**: 153–156)

Alain Dubois
Laboratoire des Reptiles et Amphibiens, Muséum national d'Histoire naturelle, 25 rue Cuvier, 75005 Paris, France

1. In order to try and protect the junior synonym HEMIDACTYLIINI Hallowell, 1856, Smith & Wake produce in their application a list of 16 references by 15 authors, most of whom are not 'independent' since they work in Wake's research team. When one deals with family-group names, the concept of stability has a meaning only when dozens, if not hundreds, of uses of the name can be called upon, which is very quickly obtained if the name has indeed been recognized by the scientific community. In this context, the number of 16 references (mostly by a single research team) is simply ridiculous and does not even deserve discussion. To add to the weakness of the case, the period of use is only 28 years (1966-1994). Of the 16 references, six (of which four are from Wake's team) are subsequent to my paper (Dubois, 1984) where the seniority of MYCETOGLOSSINI Bonaparte, 1850 over HEMIDACTYLIINI was first pointed out.

2. Family-group names have not always been strictly regulated by the Code; several of the current rules were introduced in the 1961 edition, for example Article 40 dealing with synonymy of the name of the type genus. A number of zoologists still treat family-group names as though they were not regulated. Indeed, there exists a clear tendency by some to consider that these names should *not* be regulated, as may be seen in various recent applications and even in several decisions by the Commission. These applications and decisions rely on a philosophy that can be summarized in two 'rules': (i) family-group names should not follow the principle of priority but a principle of 'current usage', i.e. all current names, however obscure and seldom used, should be protected from change; (ii) family-group names should be based on valid generic names, i.e. any based on a junior generic synonym should be replaced by one based on the valid generic name, or on another valid generic name belonging to the family-group taxon. As discussed in detail elsewhere (e.g. Dubois, 1987, pp. 48–52), most of the current rules are excellent and should be followed by all zoologists. In particular, respect for the rule of priority, for family names as for others, is the best way to achieve stability and universality. The current tendency to apply tacit 'rules' such as (i) and (ii) above, and to ask the Commission to suppress more and more names, contains the seeds of major problems for universality and stability of zoological nomenclature in the future (for more general discussion see Dubois et al., 1988 and Holynski, 1994).

3. Although this is not explicitly stated, the philosophy underlying Smith & Wake's proposal to conserve the name HEMIDACTYLIINI Hallowell, 1856 and to suppress MYCETOGLOSSINI Bonaparte, 1850 is clearly based on both 'rules' (i) and (ii) above. The fact that Wake does not attempt to adhere to the rules in the current Code, which should be followed by all zoologists, is illustrated by his statement (Wake, 1993, p. 232): 'The name Hemidactyliini ... has become well established, and the rules on zoological nomenclature are in a state of transition, so the case is not so

simple as Dubois (1984) implies. Recently an appeal has been made to the International Commission on Zoological Nomenclature to suppress the name Mycetoglossina and to conserve Hemidactyliini ... and I recommend maintaining the traditional taxonomy until the matter receives formal attention'. Such a statement is indeed very strange to read. Adopting a similar attitude would lead, for example, to rejection of the current Highway Code under the pretext that some users were criticizing aspects of it and that this Code might be changed in the future. No doubt it would be difficult to convince a traffic policeman with this argument; as long as a law has not been replaced by another one, it remains in force.

4. The aim of Smith & Wake's application is clearly to protect an invalid use first introduced by Wake (1966) five years after the publication of the 1961 Code, i.e. after the date limit fixed for the conservation of names which had 'won general acceptance'. Mycetoglossina Bonaparte, 1850 belongs to the category of names 'forgotten' simply because later authors have not done their work properly (Dubois et al., 1988, p. 148). Usually in science, when someone has made a mistake which is pointed out by another author, he has the modesty to remain silent, but apparently the recent tendency of a few zoologists to speak loud and attack the basic principles of the Code has had such strong effects on the community of zoologists that some of them lose all control and sense of proportion. The Commission should not be impressed by this and should reject this entirely unwarranted proposal.

Additional references

Dubois, A. 1987. Again on the nomenclature of frogs. *Alytes*, **6**: 27–55.

Dubois, A., Bour, R., Brygoo, E.-R., Lescure, J., Bouchet, P. & Tillier, S. 1988. Comment on the proposed suppression for nomenclature of three works by R.W. Wells & C.R. Wellington. *Bulletin of Zoological Nomenclature*, **45**: 146–149.

Holynski, R.B. 1994. Structure and function or: what kind of nomenclatural regulations do we need? *Crystal* (Zoology series) (Göd, Hungary), **2**: 1–50.

Wake, D.B. 1993. Phylogenetic and taxonomic issues relating to salamanders of the family Plethodontidae. *Herpetologica*, **49**: 229–237.

Comment on the proposed designation of a neotype for *Coelophysis bauri* (Cope, 1887) (Reptilia, Saurischia)

(Case 2840; see BZN **49**: 276–279; **50**: 147–151, 236–239, 291–294; **51**: 48–51, 156–158)

Spencer G. Lucas
New Mexico Museum of Natural History and Science, 1801 Mountain Road N.W., Albuquerque, New Mexico 87104, U.S.A.

Adrian P. Hunt
Department of Geology, University of Colorado at Denver, Campus Box 172, P.O. Box 173364, Denver, Colorado 80217–3364, U.S.A.

Recent commentary in the BZN that recommends acceptance of Colbert et al.'s application may give the impression that most vertebrate paleontologists favor the application. Significantly, a growing literature by specialists currently doing original

research on Late Triassic theropod dinosaur taxonomy and phylogeny shows just the reverse. Recent articles in this vein by Olshevsky (1991), Cuny & Galton (1993) and Paul (1993) use the name *Rioarribasaurus* and reject the name *Coelophysis* for the Ghost Ranch dinosaur. Paul's article is particularly significant because it reveals the taxonomic complexity of the Ghost Ranch quarry sample (contra Colbert et al.'s claims). Also worthy of notice is the recently published *The Dinosaur Society's Dinosaur Encyclopedia* (Lessem & Glut, 1993), which uses the name *Rioarribasaurus* for the Ghost Ranch dinosaur (although ongoing debate over the name is noted). Contrary to the impression gained by reading the commentary in the BZN, it appears that many of those now working on Late Triassic theropods, as well as the popular literature on dinosaurs, are readily and rapidly recognizing the validity of *Rioarribasaurus* and the inadvisability of perpetuating the nomen dubium *Coelophysis* despite its erroneous use in an earlier literature.

Additional references

Cuny, G. & Galton, P.M. 1993. Revision of the Airel theropod dinosaur from the Triassic-Jurassic boundary (Normandy, France). *Neues Jahrbuch für Geologie und Paläontologie Abhandlungen*, **187**: 261–288.

Lessem, D. & Glut, D.F. 1993. *The Dinosaur Society's Dinosaur Encyclopedia*. 533 pp. Random House, New York.

Olshevsky, G. 1991. A revision of the Parainfraclass Archosauria Cope, 1869, excluding the advanced Crocodylia. *Mesozoic Meanderings*, **2**: 1–196.

Comments on the proposed conservation of some mammal generic names first published in Brisson's (1762) *Regnum Animale*

(Case 2928; see BZN **51**: 135–146)

(1) J.E. Hill

12 Penlee Close, Edenbridge, Kent TN8 5NA, U.K.

It appears to be generally accepted that M.J. Brisson's *Regnum Animale* (1762) is not consistently binominal and therefore should not be available for nomenclatural purposes. Nevertheless, no formal decision has yet been made and authors cite a number of generic names from this work, partly for this reason and because the names have long been credited to Brisson, and partly because the rejection of some (e.g. *Glis*, *Cuniculus*, *Tragulus*) would involve unwelcome and confusing changes at generic and possibly family level.

An increased level of publication of check lists in the past half century and the desire to produce a relatively stable (at least in the nomenclatural sense) listing of mammalian genera and species has led to the necessity of clarifying this issue, not least to achieve consistency of usage. The application does this, expanding and formalising the proposals first set out by Ellerman & Morrison-Scott (1951) and following the precedent already established by the conservation of *Odobenus* Brisson, 1762 for the walrus (Opinion 467). Approval will confirm the advantage of an early date for the names of several well-known genera, so ensuring the prospect of present and future stability.

(2) D.W. Yalden
School of Biological Sciences, Department of Environmental Biology, University of Manchester, Williamson Building, Oxford Road, Manchester M13 9PL, U.K.

I fully support this application.

I have been particularly perplexed by the unnecessary resurrection of the name *Myoxus* Zimmermann, 1780 for the edible dormouse after all these years. *Glis* Brisson, 1762 has been very well established in both scientific and popular literature in Europe for at least a century, and *Glis glis* has even entered popular English usage (cf. *Rhododendron*). Simpson (1945) listed *Myoxus* as a junior synonym of *Glis*, which is where it usefully could have remained. I approve this formalisation of that position.

The situation with *Cuniculus* Brisson, 1762 is even more acute. *Cuniculus paca* is a well established combination and usage. The notion that *Oryctolagus* Lilljeborg, 1874 would have to be replaced as the name for the European rabbit if *Cuniculus* is no longer valid in the sense of *C. paca* is too confusing a prospect to contemplate.

Some other names seem to me to be less contentious (in that there are later, available, uses of them in their familiar meanings) but in these cases Brisson's names represent the generally accepted concepts and usages and I approve this proposal as a useful endeavour to promote stability.

(3) W.F.H. Ansell
Trendrine, Zennor, St Ives, Cornwall TR26 3BW, U.K.

I agree with the proposals to reject *Regnum Animale*, Ed. 2 (Brisson, 1762) but to conserve certain generic names from the work. For the reasons given by Ellerman & Morrison-Scott (1951, pp. 3–4), I particularly support the conservation of the names which concern my own area of study: *Pteropus* Brisson, 1762 with *Vespertilio niger* Kerr, 1792 as the type species; *Glis* Brisson, 1762 with *Sciurus glis* Linnaeus, 1766 as the type species; and *Tragulus* Brisson, 1762 with *Cervus javanicus* Osbeck, 1765 as the type species.

There might be a case for not conserving those of Brisson's names which can be dated from Brünnich (1771) with exactly the same meaning. These are *Hydrochoerus*, *Lutra*, *Hyaena*, *Tapirus* and *Giraffa*. However, *Hydrochoerus* Brisson would have to be replaced by the differently spelt *Hydrochaeris* Brünnich and it would be better to conserve these names along with the others from the earlier date of Brisson (1762).

OPINION 1778

Acineta Ehrenberg, [1834] and *Tokophrya* Bütschli, 1889 (Ciliophora, Suctoria): conserved, and *Acineta tuberosa* Ehrenberg, [1834] and *Podophrya quadripartita* Claparède & Lachmann, 1859 (currently *Tokophrya quadripartita*): specific names conserved

Ruling

(1) Under the plenary powers the following names are hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:

(a) the generic name *Volverella* Bory de St Vincent, [1827];

(b) the following specific names:

(i) *tuberosus* Pallas, 1766, as published in the binomen *Brachionus tuberosus*;

(ii) *tuberosa* Müller, 1786, as published in the binomen *Vorticella tuberosa*;

(iii) *astoma* Bory de St Vincent, [1827], as published in the binomen *Volverella astoma*.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:

(a) *Acineta* Ehrenberg, [1834] (gender: feminine), type species by subsequent designation by Collin (1912) *Acineta tuberosa* Ehrenberg, [1834];

(b) *Tokophrya* Bütschli, 1889 (gender: feminine), type species by subsequent designation by Curds (1985) *Podophrya quadripartita* Claparède & Lachmann, 1859.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *tuberosa* Ehrenberg, [1834], as published in the binomen *Acineta tuberosa* (specific name of the type species of *Acineta* Ehrenberg, [1834]);

(b) *quadripartita* Claparède & Lachmann, 1859, as published in the binomen *Podophrya quadripartita* (specific name of the type species of *Tokophrya* Bütschli, 1889).

(4) The name *Volverella* Bory de St Vincent, [1827], as suppressed in (1)(a) above, is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology.

(5) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:

(a) *tuberosus* Pallas, 1766, as published in the binomen *Brachionus tuberosus* and as suppressed in (1)(b)(i) above;

(b) *tuberosa* Müller, 1786, as published in the binomen *Vorticella tuberosa* and as suppressed in (1)(b)(ii) above;

(c) *astoma* Bory de St Vincent, [1827], as published in the binomen *Volverella astoma* and as suppressed in (1)(b)(iii) above.

History of Case 2823

An application for the conservation of the generic names *Acineta* Ehrenberg, [1834] and *Tokophrya* Bütschli, 1889, and the specific names of *Acineta tuberosa* Ehrenberg,

[1834] and *Podophrya quadripartita* Claparède & Lachmann, 1859, was received from Drs I.V. Dovgal (*Schmalhausen Institute of Zoology, Kiev, Ukraine*) and Ya.I. Starobogatov (*Zoological Institute, Russian Academy of Sciences, St Petersburg, Russia*) on 29 May 1991. After correspondence the case was published in BZN **50**: 103–106 (June 1993). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 March 1994 the members of the Commission were invited to vote on the proposals published in BZN **50**: 105. At the close of the voting period on 1 June 1994 the votes were as follows:

Affirmative votes — 23: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Kabata, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Thompson, Trjapitzin, Willink

Negative votes — 2: Holthuis and Štys.

Lehtinen abstained.

No votes were received from Cogger and Uéno.

Ride was on leave of absence.

Holthuis commented: 'Since, when describing *Acineta tuberosa*, Ehrenberg ([1834]) referred to *Vorticella tuberosa* of Müller (1786) as identical with his species (para. 4 of the application), he did not describe a new species but misidentified *Brachionus tuberosus* Pallas, 1766. There is thus no such name as *Acineta tuberosa* Ehrenberg'. Štys commented: 'There is only one nominal taxon with the specific name of *tuberosus* — *Brachionus tuberosus* Pallas, 1766. *Vorticella tuberosa* sensu Müller (1786) and *Acineta tuberosa* sensu Ehrenberg ([1834]) are only subsequent, incorrect, applications of Pallas's name'. (*Editorial note*. Drs Dovgal and Starobogatov pointed out that Ehrenberg ([1834]) was mistaken in his use of Pallas's name *tuberosus*; it was for this reason that they sought the conservation of *Acineta tuberosa* Ehrenberg as an available name for the taxon for which it has long been used).

Original references

The following are the original references to the names placed on Official Lists and Official Indexes by the ruling given in the present Opinion:

Acineta Ehrenberg, [1834], *Physikalische Mathematische Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin*, **1833**: 284. (Published in the serial in 1835 but issued as a separate in [1834]).

astoma, *Volverella*, Bory de St Vincent, [1827], *in*: *Encyclopédie Méthodique. Histoire naturelle des Zoophytes, ou Animaux rayonées*, p. 782.

quadripartita, *Podophrya*, Claparède & Lachmann, 1859, *Mémoires de l'Institut National Génevois*, **6**: 382.

Tokophrya Bütschli, 1889, *in* Bronn, H.G., *Klassen und Ordnungen des Thier-Reichs*, Band 1 (Protozoa), p. 1928.

tuberosa, *Acineta*, Ehrenberg, [1834], *Physikalische Mathematische Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin*, **1833**: 287. (Published in the serial in 1835 but issued as a separate in [1834]).

tuberosus, *Vorticella*, Müller, 1786, *Animalcula Infusoria fluviatilia et marina* ..., p. 308.

tuberosus, *Brachionus*, Pallas, 1766, *Elenchus Zoophytorum* ..., p. 105.

Volverella Bory de St Vincent, [1827], *in*: *Encyclopédie Méthodique. Histoire naturelle des Zoophytes, ou Animaux rayonées*, p. 781.

The following is the reference for the designation of *Acineta tuberosa* Ehrenberg, [1834] as the type species of the nominal genus *Acineta* Ehrenberg, [1834]:
Collin, B. 1912. *Archives de Zoologie Expérimentale et Générale*, **51**: 336.

The following is the reference for the designation of *Podophrya quadripartita* Claparède & Lachmann, 1859 as the type species of the nominal genus *Tokophrya* Bütschli, 1889:
Curds, C.R. 1985. *Bulletin of the British Museum (Natural History)*, Zoology, **49**: 169.

OPINION 1779

Potamolithus Pilsbry & Rush, 1896 (Mollusca, Gastropoda): placed on the Official List with *Paludina lapidum* d'Orbigny, 1835 as the type species

Ruling

(1) The name *Potamolithus* Pilsbry & Rush, 1896 (gender: masculine), type species by subsequent designation by Clench (1948) *Paludina lapidum* d'Orbigny, 1835, is hereby placed on the Official List of Generic Names in Zoology.

(2) The name *lapidum* d'Orbigny, 1835, as published in the binomen *Paludina lapidum* (specific name of the type species of *Potamolithus* Pilsbry & Rush, 1896) and as defined by the lectotype (specimen no. 1854.12.4.339 in the d'Orbigny collection in the Natural History Museum, London) designated by Pons da Silva & Davis (1983), is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2801

An application for the confirmation of *Potamolithus rushii* Pilsbry, 1896 as the accepted type species of *Potamolithus* Pilsbry, 1896 (December) was received from Drs Maria F. Lopez Armengol and Miguel O. Manceñido (*Universidad Nacional de La Plata, La Plata, Argentina*) on 23 November 1990. After correspondence the case was published in BZN **49**: 109–111 (June 1992). Notice of the case was sent to appropriate journals.

An opposing comment from Dr Alan R. Kabat (*National Museum of Natural History, Smithsonian Institution, Washington, D.C., U.S.A.*) was published in BZN **50**: 52 (March 1993), together with a reply by the authors of the application. Dr Kabat pointed out that there was a valid type species designation for *Potamolithus* Pilsbry & Rush, 1896 (November) by Clench (1948), who had designated *Paludina lapidum* d'Orbigny, 1835. Dr Kabat subsequently noted (in litt., April and November 1993) that he (Kabat & Hershler, 1993, p. 44) had cited *P. lapidum* as the type species of *Potamolithus*, following Clench's designation, as had (acting on his advice) Hershler & Thompson (1992, p. 129).

A comment from Dr Maria Christina Pons da Silva (*Museu de Ciências Naturais, Porto Alegre, Brazil*) in support of the type species designation for *Potamolithus* of *P. rushii* was published in BZN **50**: 228 (September 1993).

Hershler, R. & Thompson, F.G. 1992. A review of the aquatic gastropod subfamily Cochliopinae (Prosobranchia: Hydrobiidae). *Malacological Review*, Supplement **5**.

Kabat, A.R. & Hershler, R. 1993. The prosobranch snail family Hydrobiidae (Gastropoda: Rissooidea): review of classification and supraspecific taxa. *Smithsonian Contributions to Zoology*, **547**: 1–94.

A revised version of the original proposals, seeking to set aside Clench's (1948) designation of *Paludina lapidum* d'Orbigny, 1835 as the type species of *Potamolithus* Pilsbry & Rush, 1896 and to designate *P. rushii* Pilsbry, 1896 as the type, was offered for voting.

Decision of the Commission

On 1 March 1994 the members of the Commission were invited to vote on the revised proposals. At the close of the voting period on 1 June 1994 the votes were as follows:

Affirmative votes — 12: Bock, Bouchet, Corliss, Kraus, Macpherson, Mahnert, Nielsen, Savage, Schuster, Starobogatov, Trjapitzin, Willink

Negative votes — 14: Bayer, Cocks, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Lehtinen, Martins de Souza, Minelli, Nye, Štys and Thompson.

No votes were received from Cogger and Uéno.

Ride was on leave of absence.

Voting in favour of the designation of *Potamolithus rushii* Pilsbry, 1896 as the type species, Bouchet commented: 'I consider that I am following Pilsbry's intention when he introduced the name *Potamolithus*. It is clear from Pilsbry's December 1896 paper that Pilsbry regarded the November paper as a preview of his ideas. The November footnote confirms this' (para. 1 of the application). Voting against, Dupuis commented that Kabat had spoken convincingly for the acceptance of *P. lapidum* d'Orbigny, 1835 as the type species of *Potamolithus*; the species was included in the genus by Pilsbry & Rush (1896) and had been designated as the type in 1948. The applicants had not opposed this designation. Hahn commented: 'Specialists do not agree in this case; therefore it may be better to follow the Code and to accept *P. lapidum* as the type species of *Potamolithus*'. Holthuis commented: 'Since the applicants had noted (BZN **50**: 53) that 'the two alternatives do not entail substantially different immediate conseqences', it would be unforgivable to use the plenary powers in this case'. Kabata commented: 'Clench's (1948) type species designation was valid and setting it aside would be justified only if its acceptance seriously threatened nomenclatural stability. In spite of Dr Pons da Silva's comment, I do not see it as anything but a small perturbation (if any)'. Nye commented: 'As the publication of this case has brought to light a valid type species designation that does not upset stability there is no need for the Commission to invoke the use of the plenary powers and therefore it should not do so'. Štys commented: 'I cannot see why a perfectly clear nomenclatural situation should be interfered with, and why the straightforward application of the Code should not be observed'.

Since the majority required to set aside Clench's (1948) type species designation was not reached, this remains the valid designation and *Paludina lapidum* is the type species of *Potamolithus* Pilsbry & Rush, 1896.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

lapidum, *Paludina*, d'Orbigny, 1835, *Magasin de Zoologie*, Classe 5 (Mollusques), **5**(62): 29.

Potamolithus Pilsbry & Rush, 1896 (November), *The Nautilus*, **10**(7): 80.

The following is the reference for the designation of *Paludina lapidum* d'Orbigny, 1835 as the type species of the nominal genus *Potamolithus* Pilsbry & Rush, 1896:

Clench, W.J. 1948. *The Nautilus*, **61**(3): 105.

The following is the reference for the designation of the lectotype of *Paludina lapidum* d'Orbigny, 1835:

Pons da Silva, M.C. & Davis, G.M. 1983. *Proceedings of the Academy of Natural Sciences of Philadelphia*, **135**: 143.

OPINION 1780

Turbo politus Linnaeus, 1758 (currently *Melanella polita*; Mollusca, Gastropoda): usage of the specific name conserved, so conserving the specific name of *Buccinum acicula* Müller, 1774 (currently *Cecilioides acicula*)

Ruling

(1) Under the plenary powers all previous fixations of type specimen for the nominal species *Turbo politus* Linnaeus, 1758 are hereby set aside and the neotype designation by Warén (1988) is confirmed.

(2) The name *politus* Linnaeus, 1758, as published in the binomen *Turbo politus* and as defined by the neotype designated by Warén (1988) (specimen no. 1071 in the Zoological Museum, Uppsala), confirmed in (1) above, is hereby placed on the Official List of Specific Names in Zoology.

(3) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:

(a) *intermedia* Cantraine, 1835, as published in the binomen *Eulima intermedia* (a junior objective synonym of the specific name of *Turbo politus* Linnaeus, 1758);

(b) *sinuosa* Scacchi, 1836, as published in the binomen *Rissoa sinuosa* (a junior objective synonym of the specific name of *Turbo politus* Linnaeus, 1758).

History of Case 2820

An application for the conservation of the accustomed usage of the specific name of *Turbo politus* Linnaeus, 1758, so conserving also the specific name of *Buccinum acicula* Müller, 1774, was received from Drs Anders Warén (*Naturhistoriska Riksmuseet, Stockholm, Sweden*) and Edmund Gittenberger (*Nationaal Natuurhistorisch Museum, Leiden, The Netherlands*) on 29 April 1991. After correspondence the case was published in BZN **50**: 107–111 (June 1993). Notice of the case was sent to appropriate journals.

The name *Cecilioides* Férussac, 1814, and that of its type species *Buccinum acicula* Müller, 1774, were placed on Official Lists in Opinion 335 (March 1955).

Decision of the Commission

On 1 March 1994 the members of the Commission were invited to vote on the proposals published in BZN **50**: 109–110. At the close of the voting period on 1 June 1994 the votes were as follows:

Affirmative votes — 26: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — none.

No votes were received from Cogger and Uéno.

Ride was on leave of absence.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

intermedia, *Eulima*, Cantraine, 1835, *Bulletins de l'Académie Royale des Sciences et Belles-Lettres de Bruxelles*, **2**: 390.
politus, *Turbo*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 767.
sinuosa, *Rissoa*, Scacchi, 1836, *Catalogus conchyliorum regni Neapolitani*, p. 15.

The following is the reference for the designation of the neotype of *Turbo politus* Linnaeus, 1758:
Warén, A. 1988. *Bollettino Malacologico*, **24**: 20.

OPINION 1781

Termes lacteus Froggatt, 1898 (currently *Coptotermes lacteus*; Insecta, Isoptera): specific name conserved

Ruling

(1) Under the plenary powers the specific name *lactis* Froggatt, 1897, as published in the binomen *Termes lactis*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *lacteus* Froggatt, 1898, as published in the binomen *Termes lacteus*, is hereby placed on the Official List of Specific Names in Zoology.

(3) The name *lactis* Froggatt, 1897, as published in the binomen *Termes lactis* and as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 2864

An application for the conservation of the specific name of *Termes lacteus* Froggatt, 1898 was received from the late Dr J.A.L. Watson and from Dr H.M. Abbey (both of *CSIRO, Canberra, Australia*) on 21 October 1992. After correspondence the case was published in BZN **50**: 112–114 (June 1993). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 March 1994 the members of the Commission were invited to vote on the proposals published in BZN **50**: 113. At the close of the voting period on 1 June 1994 the votes were as follows:

Affirmative votes — 22: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Trjapitzin, Willink

Negative votes — 4: Kabata, Lehtinen, Štys and Thompson.

No votes were received from Cogger and Uéno.

Ride was on leave of absence.

Voting for, Dupuis commented that the *Agricultural Gazette of New South Wales* is a well known journal and it would have been preferable to consider *lacteus* as a valid correction from Froggatt (1897) (para. 1 of the application). Voting against, Kabata commented: 'Froggatt's original name *lactis* is correctly formed under Article 11h(i)(3) of the Code and it cannot be considered a lapsus. In my view its retention or restoration is not going to cause a major disturbance in the literature'. Štys commented that the provisions of the Code should be followed in this case. Thompson commented: 'I consider that this application is unnecessary as *Termes lactis* Froggatt, 1897 is not an available name. Froggatt himself (1898) declared this when he stated that his 1897 work was a 'popular paper' (para. 2 of the application), thereby rendering it a work not issued for permanent scientific record (Article 8a(1))'.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

lacteus, *Termes*, Froggatt, 1898, *Proceedings of the Linnean Society of New South Wales*, **22**: 721.

lactis, *Termes*, Froggatt, 1897, *Agricultural Gazette of New South Wales*, **8**: plate facing p. 297.

OPINION 1782

Corisa nigrolineata Fieber, 1848 (currently *Sigara* (*Pseudovermicorixa*) *nigrolineata*; Insecta, Heteroptera): specific name conserved

Ruling

(1) Under the plenary powers the following specific names are hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:

(a) *minutior* Sulzer, 1776, as published in the binomen *Notonecta minutior*;

(b) *minuta* Gmelin, 1790, as published in the binomen *Notonecta minuta*.

(2) The name *nigrolineata* Fieber, 1848, as published in the binomen *Corisa nigrolineata*, is hereby placed on the Official List of Specific Names in Zoology.

(3) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:

(a) *minutior* Sulzer, 1776, as published in the binomen *Notonecta minutior* and as suppressed in (1)(a) above;

(b) *minuta* Gmelin, 1790, as published in the binomen *Notonecta minuta* and as suppressed in (1)(b) above.

History of Case 2830

An application for the conservation of the specific name of *Corisa nigrolineata* Fieber, 1848 was received from Drs Antti Jansson (*Zoological Museum, University of Helsinki, Finland*) and John T. Polhemus (*University of Colorado Museum, Englewood, Colorado, U.S.A.*) on 27 August 1991. After correspondence the case was published in BZN **50**: 121–123 (June 1993). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 March 1994 the members of the Commission were invited to vote on the proposals published in BZN **50**: 122. At the close of the voting period on 1 June 1994 the votes were as follows:

Affirmative votes — 24: Bayer, Bock, Cocks, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — 2: Bouchet and Macpherson.

No votes were received from Cogger and Uéno.

Ride was on leave of absence.

Holthuis commented that Gmelin's (1790) *Notonecta minuta* was not an emendation of Sulzer's (1776) name as he did not explicitly say so. It was either a new name (not necessarily a substitute name) or an erroneous spelling.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

minuta, *Notonecta*, Gmelin, 1790, *Caroli a Linné Systema Naturae*, Ed. 13, vol. 1, part 4, p. 2119.

minutior, *Notonecta*, Sulzer, 1776, *Abgekürzte Geschichte der Insecten*, part 2, p. 91.

nigrolineata, *Corisa*, Fieber, 1848, *Nouveaux Mémoires de la Société Impériale des Naturalistes de Moscou*, **21**: 527.

OPINION 1783

Aradus caucasicus Kolenati, 1857 (Insecta, Heteroptera): syntype replaced by a neotype, so conserving the usage of the specific name and that of *A. hieroglyphicus* Sahlberg, 1878

Ruling

(1) Under the plenary powers all previous fixations of type specimens for the nominal species *Aradus caucasicus* Kolenati, 1857 are hereby set aside and the male specimen labelled '(1) Derbent; (2) 13' in the Jakovlev collection in the Zoological Institute, Russian Academy of Sciences, St Petersburg, Russia, is designated as the neotype.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *caucasicus* Kolenati, 1857, as published in the binomen *Aradus caucasicus* and as defined by the neotype designated in (1) above;

(b) *hieroglyphicus* Sahlberg, 1878, as published in the binomen *Aradus hieroglyphicus*.

History of Case 2843

An application for the syntype of *Aradus caucasicus* Kolenati, 1857 to be replaced by a neotype, so conserving the usage of the specific name and that of *A. hieroglyphicus* Sahlberg, 1878, was received from Dr I.M. Kerzhner (*Zoological Institute, Russian Academy of Sciences, St Petersburg, Russia*) and Prof Ernst Heiss (*Tiroler Landesmuseum, Innsbruck, Austria*) on 10 February 1992. After correspondence the case was published in BZN **50**: 115–117 (June 1993). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 March 1994 the members of the Commission were invited to vote on the proposals published in BZN **50**: 116. At the close of the voting period on 1 June 1994 the votes were as follows:

Affirmative votes — 24: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — 2: Lehtinen and Macpherson.

No votes were received from Cogger and Uéno.

Ride was on leave of absence.

Original references

The following are the original references to the names placed on an Official List by the ruling given in the present Opinion:

caucasicus, *Aradus*, Kolenati, 1857, *Bulletin de la Société Impériale des Naturalistes de Moscou*, **29**(4): 438.

hieroglyphicus, *Aradus*, Sahlberg, 1878, *Kongliga Svenska Vetenskaps-Akademiens Handlingar*, **16**(4): 22.

OPINION 1784

Buprestis Linnaeus, 1758 and *Chrysobothris* Eschscholtz, 1829 (Insecta, Coleoptera): conserved by the designation of *Buprestis octoguttata* Linnaeus, 1758 as the type species of *Buprestis*, and *Chrysobothris* and *Dicerca* Eschscholtz, 1829: conserved as the correct original spellings

Ruling

(1) Under the plenary powers:

(a) all previous fixations of type species for the nominal genus *Buprestis* Linnaeus, 1758 are hereby set aside and *Buprestis octoguttata* Linnaeus, 1758 is designated as the type species;

(b) the correct original spellings of the generic names *Chrysobotris* Eschscholtz, 1829 and *Dicerea* Eschscholtz, 1829 are hereby ruled to be *Chrysobothris* and *Dicerca* respectively.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:

(a) *Buprestis* Linnaeus, 1758 (gender: feminine), type species by designation in (1)(a) above *Buprestis octoguttata* Linnaeus, 1758;

(b) *Chrysobothris* Eschscholtz, 1829 (gender: feminine), spelling ruled in (1)(b) above, type species by subsequent designation by Westwood ([1838]) *Buprestis chrysostigma* Linnaeus, 1758;

(c) *Dicerca* Eschscholtz, 1829 (gender: feminine), spelling ruled in (1)(b) above, type species by subsequent designation by Westwood ([1838]) *Buprestis aenea* Linnaeus, 1761.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *octoguttata* Linnaeus, 1758, as published in the binomen *Buprestis octoguttata* (specific name of the type species of *Buprestis* Linnaeus, 1758);

(b) *chrysostigma* Linnaeus, 1758, as published in the binomen *Buprestis chrysostigma* (specific name of the type species of *Chrysobothris* Eschscholtz, 1829);

(c) *aenea* Linnaeus, 1761, as published in the binomen *Buprestis aenea* (specific name of the type species of *Dicerca* Eschscholtz, 1829).

(4) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:

(a) *Chrysobotris* Eschscholtz, 1829 (ruled in (1)(b) above to be an incorrect original spelling of *Chrysobothris* Eschscholtz, 1829);

(b) *Dicerea* Eschscholtz, 1829 (ruled in (1)(b) above to be an incorrect original spelling of *Dicerca* Eschscholtz, 1829);

(c) *Odontomus* Kirby, 1837 (a junior objective synonym of *Chrysobothris* Eschscholtz, 1829).

History of Cases 2758 and 2772

An application (Case 2758) to conserve the usage of both *Buprestis* Linnaeus, 1758 and *Chrysobothris* Eschscholtz, 1829 by the designation of *B. octoguttata* Linnaeus,

1758 as the type species of *Buprestis* was received from Prof G.H. Nelson (*College of Osteopathic Medicine of the Pacific, Pomona, California, U.S.A.*) and Dr W.F. Barr (*University of Idaho, Moscow, Idaho, U.S.A.*) on 8 February 1990. An application (Case 2772) to conserve the spelling of *Chrysobothris* and of *Dicerca* Eschscholtz, 1829 was received from Prof Nelson on 10 May 1990. After correspondence the cases were published in BZN **50**: 23–26 (March 1993) and BZN **49**: 120–121 (June 1992) respectively. Notice of the cases was sent to appropriate journals.

A comment in support of the designation of *Buprestis octoguttata* as the type species of *Buprestis* was received from Dr Richard L. Westcott (*Oregon Department of Agriculture, Salem, Oregon, U.S.A.*) and published in BZN **50**: 231 (September 1993).

Comments in support of the conservation of the spellings of *Chrysobothris* and *Dicerca* from Dr Westcott and from Dr Svatopluk Bílý (*National Museum, Praha, Czech Republic*) were published in BZN **49**: 290 (December 1992). A further comment in support of the spellings from Dr Charles L. Bellamy (*Escondido, California, U.S.A.*) was published in BZN **50**: 56 (March 1993).

Support for both applications was received from Dr Hans Silfverberg (*Universitetets Zoologiska Museum, Helsingfors, Finland*).

Herr Hans Mühle (*München, Germany*) submitted a similar application for the conservation of the spelling of *Dicerca* (see footnote on BZN **49**: 120) subsequent to the receipt of that from Prof Nelson.

Decisions of the Commission

On 1 March 1994 the members of the Commission were invited to vote separately on the proposals published in BZN **49**: 121 (Case 2772) and in **50**: 23 (Case 2758). At the close of the voting period on 1 June 1994 the votes for both sets of proposals were as follows:

Affirmative votes — 26: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — none.

No votes were received from Cogger and Uéno.

Ride was on leave of absence.

Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

aenea, *Buprestis*, Linnaeus, 1761, *Fauna Suecica*, Ed. 2, p. 213.

Buprestis Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 408.

Chrysobothris Eschscholtz, 1829, *Zoologischer Atlas, enthaltend abbildungen und Beschreibungen neurer Thierarten ... auf der Russisch-Kaiserlichen Kriegsschlupp* Predpriaetië *in den Jahren 1823-1826*, part 1, p. 9 (incorrectly spelled as *Chrysobotris*).

Chrysobotris Eschscholtz, 1829, *Zoologischer Atlas, enthaltend abbildungen und Beschreibungen neurer Thierarten ... auf der Russisch-Kaiserlichen Kriegsschlupp* Predpriaetië *in den Jahren 1823-1826*, part 1, p. 9 (an incorrect original spelling of *Chrysobothris*).

chrysostigma, *Buprestis*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 409.

Dicerca Eschscholtz, 1829, *Zoologischer Atlas, enthaltend abbildungen und Beschreibungen neurer Thierarten ... auf der Russisch-Kaiserlichen Kriegsschlupp* Predpriaetië *in den Jahren*

1823-1826, part 1, p. 9 (incorrectly spelled as *Dicerea*).

Dicerea Eschscholtz, 1829, *Zoologischer Atlas, enthaltend abbildungen und Beschreibungen neurer Thierarten ... auf der Russisch-Kaiserlichen Kriegsschlupp* Predpriaetië *in den Jahren 1823-1826*, part 1, p. 9 (an incorrect original spelling of *Dicerca*).

octoguttata, *Buprestis*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 408.

Odontomus Kirby, 1837, *in* Richardson, J., *Fauna Boreali-Americana, or the zoology of the northern parts of British America*, part 4, p. 156.

The following is the reference for the designation of *Buprestis chrysostigma* Linnaeus, 1758 as the type species of *Chrysobothris* Eschscholtz, 1829 and of *B. aenea* Linnaeus, 1761 as the type species of *Dicerca* Eschscholtz, 1829:

Westwood, J.O. [1838]. *Synopsis of the genera of British insects*, p. 24 (published with *An introduction to the modern classification of insects* ...., vol. 1, part 3, pp. 113–160).

OPINION 1785

Dytiscus biguttatus Olivier, 1795 (currently *Agabus biguttatus*; Insecta, Coleoptera): specific name conserved

Ruling

(1) Under the plenary powers the specific name *biguttatus* Gmelin, 1790, as published in the binomen *Dytiscus biguttatus*, and all uses of the name *Dytiscus biguttatus* prior to that by Olivier, 1795, are hereby suppressed for the purposes of both the Principle of Priority and the Principle of Homonymy.

(2) The name *biguttatus* Olivier, 1795, as published in the binomen *Dytiscus biguttatus*, is hereby placed on the Official List of Specific Names in Zoology.

(3) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:

(a) *biguttatus* Gmelin, 1790, as published in the binomen *Dytiscus biguttatus* and as suppressed in (1) above;

(b) *olivieri* Zaitzev, 1908, as published in the binomen *Agabus olivieri* (a junior objective synonym of the specific name of *Dytiscus biguttatus* Olivier, 1795).

History of Case 2777

An application for the conservation of the specific name of *Dytiscus biguttatus* Olivier, 1795 was received from Dr A.N. Nilsson (*University of Umeå, Umeå, Sweden*) on 1 June 1990. After correspondence the case was published in BZN **50**: 127 128 (June 1993). Notice of the case was sent to appropriate journals.

Support for the application was received from Dr Hans Silfverberg (*Universitetets Zoologiska Museum, Helsingfors, Finland*).

Decision of the Commission

On 1 March 1994 the members of the Commission were invited to vote on the proposals published in BZN **50**: 127–128. At the close of the voting period on 1 June 1994 the votes were as follows:

Affirmative votes — 23: Bayer, Bock, Cocks, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Thompson, Trjapitzin, Willink

Negative votes — 3: Bouchet, Macpherson and Štys.

No votes were received from Cogger and Uéno.

Ride was on leave of absence.

Štys commented: 'The problem of the primary homonymy between *Dytiscus biguttatus* Gmelin, 1790 and *D. biguttatus* Olivier, 1795 was correctly dealt with by Zaitsev (1908), who proposed the replacement specific name of *Agabus olivieri* for the latter. In my view the Commission should not sanction the disregard for the correct nomenclatural action by the coleopterological community'.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

biguttatus, *Dytiscus*, Gmelin, 1790, *Caroli a Linné Systema Naturae*, Ed. 13, vol. 1, part 4, p. 1959.

biguttatus, *Dytiscus*, Olivier, 1795, *Entomologie, ou histoire naturelle des insectes*, vol. 3, no. 40, p. 26.

olivieri, *Agabus*, Zaitzev, 1908, *Russkoe Entomologicheskoe Obozrenie*, **7**: 121.

OPINION 1786

Ascopora Trautschold, 1876 (Bryozoa, Cryptostomata): *Ceriopora nodosa* Fischer von Waldheim, 1837 designated as the type species

Ruling

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Ascopora* Trautschold, 1876 are hereby set aside and *Ceriopora nodosa* Fischer von Waldheim, 1837 is designated as the type species.

(2) The name *Ascopora* Trautschold, 1876 (gender: feminine), type species by designation under the plenary powers in (1) above *Ceriopora nodosa* Fischer von Waldheim, 1837, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *nodosa* Fischer von Waldheim, 1837, as published in the binomen *Ceriopora nodosa* (specific name of the type species of *Ascopora* Trautschold, 1876) is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2847

An application for the designation of *Ceriopora nodosa* Fischer von Waldheim, 1837 as the type species of *Ascopora* Trautschold, 1876 was received from Dr Patrick N. Wyse Jackson (*Trinity College, Dublin, Ireland*) on 11 May 1992. After correspondence the case was published in BZN **50**: 13–15 (March 1993). Notice of the case was sent to appropriate journals.

It was noted on the voting paper that support for the designation of *Ceriopora nodosa* as the type species of *Ascopora* had been received from Prof D.B. Blake (*University of Illinois at Urbana-Champaign, Urbana, Illinois, U.S.A.*) (author of the relevant section of the *Treatise on Invertebrate Paleontology*; cf. para. 4 of the application), who commented: 'From the best available data, following the Code strictly in this case is confusing'.

Decision of the Commission

On 1 March 1994 the members of the Commission were invited to vote on the proposals published in BZN **50**: 14. At the close of the voting period on 1 June 1994 the votes were as follows:

Affirmative votes — 26: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — none.

No votes were received from Cogger and Uéno.

Ride was on leave of absence.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

Ascopora Trautschold, 1876, *Nouveaux Mémoires de la Société Impériale des Naturalistes de Moscou*, **13**: 367.

nodosa, *Ceriopora*, Fischer von Waldheim, 1837, *Oryctographie du Gouvernement de Moscou*, Ed. 2, p. 166.

OPINION 1787

Mugil curema and *M. liza* Valenciennes in Cuvier & Valenciennes, 1836 (Osteichthyes, Perciformes): specific names conserved

Ruling

(1) Under the plenary powers the following specific names are hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:

(a) *brasiliensis* Spix in Spix & Agassiz, 1831, as published in the binomen *Mugil brasiliensis*;

(b) *gaimardianus* Desmarest, 1831, as published in the binomen *Mugil gaimardianus*.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *curema* Valenciennes in Cuvier & Valenciennes, 1836, as published in the binomen *Mugil curema* and as defined by the lectotype (specimen no. A.3638 in the Muséum National d'Histoire Naturelle, Paris) designated by Harrison (1993);

(b) *liza* Valenciennes in Cuvier & Valenciennes, 1836, as published in the binomen *Mugil liza* and as defined by the lectotype (specimen no. A.4659 in the Muséum National d'Histoire Naturelle, Paris) designated by Harrison (1993).

(3) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:

(a) *brasiliensis* Spix in Spix & Agassiz, 1831, as published in the binomen *Mugil brasiliensis* and as suppressed in (1)(a) above;

(b) *gaimardianus* Desmarest, 1831, as published in the binomen *Mugil gaimardianus* and as suppressed in (1)(b) above.

History of Case 2834

An application for the conservation of the specific names of *Mugil curema* and *M. liza*, both of Valenciennes in Cuvier & Valenciennes (1836), was received from Drs Luis Alvarez-Lajonchere (*Centro de Investigaciones Pesqueras, Ciudad de la Habana, Cuba*), Gordon J. Howes (*The Natural History Museum, London, U.K.*) and the late Dr Ethelwynn Trewavas on 23 October 1991. After correspondence the case was published in BZN **49**: 271–275 (December 1992). Notice of the case was sent to appropriate journals.

A comment in support from Dr Ian J. Harrison (*Musée Royal de l'Afrique Centrale, Tervuren, Belgium*) was published in BZN **50**: 144–147 (June 1993).

It was noted on the voting paper that support for Dr Harrison's designation of lectotypes for *Mugil curema*, *M. liza* and *M. petrosus*, all of Valenciennes in Cuvier & Valenciennes (1836), from the type material in the Muséum National d'Histoire Naturelle, Paris (cf. paras. 6 and 7 of the application) was received from Dr M.-L. Bauchot (curator in the Paris museum), who commented (in litt. to Dr Harrison, February 1993): 'J'ai lu très attentivement et avec beaucoup d'intérêt votre manuscrit

et la publication d'Alvarez Lajonchère et al. Je suis sûre que votre texte va clarifier de façon définitive le problème posé par ces Mugilidés'.

Decision of the Commission

On 1 March 1994 the members of the Commission were invited to vote on the proposals published in BZN **49**: 273–274. At the close of the voting period on 1 June 1994 the votes were as follows:

Affirmative votes — 26: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — none.

No votes were received from Cogger and Uéno.

Ride was on leave of absence.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

brasiliensis, *Mugil*, Spix in Spix & Agassiz, 1831, *Selecta genera et species piscium quos in itinere per Brasiliam* ..., part 2, p. 134.

curema, *Mugil*, Valenciennes in Cuvier & Valenciennes, 1836, *Histoire naturelle des poissons*, vol. 11, p. 87.

gaimardianus, *Mugil*, Desmarest, 1831, *in* Bory de Saint-Vincent, J.B.G.M. (Ed.), *Dictionnaire classique d'histoire naturelle*, vol. 17 (Atlas et illustration des planches), pl. 109.

liza, *Mugil*, Valenciennes in Cuvier & Valenciennes, 1836, *Histoire naturelle des poissons*, vol. 11, p. 83.

The following is the reference for the designation of the lectotypes of *Mugil curema* and *M. liza*, both of Valenciennes in Cuvier & Valenciennes (1836):

Harrison, I.J. 1993. BZN **50**: 145, 146 (respectively).

OPINION 1788

Scelidosaurus harrisonii Owen, 1861 (Reptilia, Ornithischia): lectotype replaced

Ruling

(1) Under the plenary powers all previous designations of a lectotype for the nominal species *Scelidosaurus harrisonii* Owen, 1861 are hereby set aside and the skull and skeleton BM(NH) Pal. Dept. no. R.1111 in the Natural History Museum, London is designated as the replacement lectotype.

(2) The name *Scelidosaurus* Owen, 1859 (gender: masculine), type species by subsequent monotypy *Scelidosaurus harrisonii* Owen, 1861, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *harrisonii* Owen, 1861, as published in the binomen *Scelidosaurus harrisonii* and as defined by the lectotype designated in (1) above (specific name of the type species of *Scelidosaurus* Owen, 1859), is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2857

An application for the designation of a replacement lectotype for *Scelidosaurus harrisonii* Owen, 1861 was received from Dr Alan J. Charig (*The Natural History Museum, London, U.K.*) and the late Dr Bernard H. Newman on 20 July 1992. After correspondence the case was published in BZN **49**: 280–283 (December 1992). Notice of the case was sent to appropriate journals.

It was noted on the voting paper that the usage of the name *Scelidosaurus harrisonii* was documented by Newman (1968), Charig (1972) and Thulborn (1977).

Decision of the Commission

On 1 December 1993 the members of the Commission were invited to vote on the proposals published in BZN **49**: 282–283. At the close of the voting period on 1 March 1994 the votes were as follows:

Affirmative votes — 25: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Hahn, Heppell, Holthuis, Kabata, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Uéno, Willink

Negative votes — none.

No votes were received from Halvorsen and Lehtinen.

Dupuis and Ride were on leave of absence.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

Scelidosaurus Owen, 1859, *in*: *Encyclopaedia Britannica*, Ed. 8, vol. 17, p. 150.

harrisonii, *Scelidosaurus*, Owen, 1861, *Monograph of the Palaeontographical Society*, **1**: 1.

The following is the reference for the fixation of *Scelidosaurus harrisonii* Owen, 1861 as the type species of the nominal genus *Scelidosaurus* Owen, 1859:

Owen, R. 1861. *Monograph of the Palaeontographical Society*, **1**: 1.

OPINION 1789

Pseudoxyrhopus Günther, 1881 (Reptilia, Serpentes): conserved

Ruling

(1) Under the plenary powers the generic name *Homalocephalus* Jan, 1863 is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *Pseudoxyrhopus* Günther, 1881 (gender: masculine), type species by monotypy of the replaced nominal genus *Homalocephalus* Jan, 1863, *Homalocephalus heterurus* Jan, 1863, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *heterurus* Jan, 1863, as published in the binomen *Homalocephalus heterurus* (specific name of the type species of *Pseudoxyrhopus* Günther, 1881) is hereby placed on the Official List of Specific Names in Zoology.

(4) The name *Homalocephalus* Jan, 1863, as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology.

History of Case 2814

An application for the conservation of *Pseudoxyrhopus* Günther, 1881 was received from Profs Hobart M. Smith and David Chiszar (*University of Colorado, Boulder, Colorado, U.S.A.*), Kenneth L. Williams (*Northwestern State University, Natchitoches, Louisiana, U.S.A.*) and Van Wallach (*Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, U.S.A.*) on 8 April 1991. After correspondence the case was published in BZN **49**: 284–286 (December 1992). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 December 1993 the members of the Commission were invited to vote on the proposals published in BZN **49**: 285. At the close of the voting period on 1 March 1994 the votes were as follows:

Affirmative votes — 23: Bayer, Bock, Cocks, Cogger, Corliss, Hahn, Heppell, Kabata, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Uéno, Willink

Negative votes — 2: Bouchet and Holthuis.

No votes were received from Halvorsen and Lehtinen.

Dupuis and Ride were on leave of absence.

Holthuis commented that the genus was small (eight species) with a restricted distribution and it was his view that substitution of the name *Pseudoxyrhopus* by *Homalocephalus* was unlikely to cause confusion.

Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

heterurus, Homalocephalus, Jan, 1863, *Archivio per la Zoologia, l'Anatomia e la Fisiologia*, **2**(2): 286.

Homalocephalus Jan, 1863, *Archivio per la Zoologia, l'Anatomia e la Fisiologia*, **2**(2): 286.

Pseudoxyrhopus Günther, 1881, *Annals and Magazine of Natural History*, (5)**7**(41): 359.

OPINION 1790

Lagomeryx Roger, 1904 (Mammalia, Artiodactyla): *Lagomeryx ruetimeyeri* Thenius, 1948 designated as the type species

Ruling

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Lagomeryx* Roger, 1904 are hereby set aside and *Lagomeryx ruetimeyeri* Thenius, 1948 is designated as the type species.

(2) The name *Lagomeryx* Roger, 1904 (gender: masculine), type species by designation under the plenary powers in (1) above *Lagomeryx ruetimeyeri* Thenius, 1948, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *ruetimeyeri* Thenius, 1948, as published in the binomen *Lagomeryx ruetimeyeri* (specific name of the type species of *Lagomeryx* Roger, 1904) is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2882

An application for the designation of *Lagomeryx ruetimeyeri* Thenius, 1948 as the type species of *Lagomeryx* Roger, 1904 was received from Drs A.W. Gentry (c/o *The Natural History Museum, London, U.K.*) and E.P.J. Heizmann (*Staatliches Museum für Naturkunde in Stuttgart, Stuttgart, Germany*) on 8 March 1993. After correspondence the case was published in BZN **50**: 133–136 (June 1993). Notice of the case was sent to appropriate journals.

Comments in support from Prof Léonard Ginsburg (*Muséum National d'Histoire Naturelle, Paris, France*) and Dr A.M. Lister (*University College London, London, U.K.*) were published in BZN **50**: 295 296 (December 1993).

Decision of the Commission

On 1 March 1994 the members of the Commission were invited to vote on the proposals published in BZN **50**: 135. At the close of the voting period on 1 June 1994 the votes were as follows:

Affirmative votes — 26: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — none.

No votes were received from Cogger and Uéno.

Ride was on leave of absence.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

Lagomeryx Roger, 1904, *Bericht des Naturwissenschaftlichen Vereins für Schwaben und Neuburg (a.V.) Augsburg*, **36**: 18.

ruetimeyeri, *Lagomeryx*, Thenius, 1948, *Anzeiger der Oesterreichischen Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. Wien*, **14**: 221.

OPINION 1791

Procervulus Gaudry, 1877 (Mammalia, Artiodactyla): *Antilope dichotoma* Gervais, 1849 designated as the type species

Ruling

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Procervulus* Gaudry, 1877 are hereby set aside and *Antilope dichotoma* Gervais, 1849 is designated as the type species.

(2) The name *Procervulus* Gaudry, 1877 (gender: masculine), type species by designation under the plenary powers in (1) above *Antilope dichotoma* Gervais, 1849, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *dichotoma* Gervais, 1849, as published in the binomen *Antilope dichotoma* (specific name of the type species of *Procervulus* Gaudry, 1877) is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2883

An application for the designation of *Antilope dichotoma* Gervais, 1849 as the type species of *Procervulus* Gaudry, 1877 was received from Drs A.W. Gentry (c/o *The Natural History Museum, London, U.K.*) and G. Rössner (*Universitäts-Institut für Paläontologie und historische Geologie, München, Germany*) on 8 March 1993. After correspondence the case was published in BZN **50**: 137–139 (June 1993). Notice of the case was sent to appropriate journals.

A comment in support from Dr A.M. Lister (*University College London, London, U.K.*) was published in BZN **50**: 296 (December 1993).

Decision of the Commission

On 1 March 1994 the members of the Commission were invited to vote on the proposals published in BZN **50**: 138. At the close of the voting period on 1 June 1994 the votes were as follows:

Affirmative votes — 26: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — none.

No votes were received from Cogger and Uéno.

Ride was on leave of absence.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

dichotoma, *Antilope*, Gervais, 1849, *Compte Rendu Hebdomadaire des Séances de l'Académie des Sciences*, **28**: 549.

Procervulus Gaudry, 1877, *Les enchaînements du monde animal dans les temps géologiques. Mammifères tertiaires*, p. 88; *La Revue Scientifique de la France et de l'Étranger*, (2)**13**(24): 555.

INFORMATION AND INSTRUCTIONS FOR AUTHORS

The following notes are primarily for those preparing applications; other authors should comply with the relevant sections. Applications should be prepared in the format of recent parts of the Bulletin; manuscripts not prepared in accordance with these guidelines may be returned.

General. Applications are requests to the Commission to set aside or modify the Code's provisions as they relate to a particular name or group of names when this appears to be in the interest of stability of nomenclature. Authors submitting cases should regard themselves as acting on behalf of the zoological community and the Commission will treat applications on this basis. Applicants are advised to discuss their cases with other workers in the same field before submitting applications, so that they are aware of any wider implications and the likely reactions of other zoologists.

Text. Typed in double spacing, this should consist of numbered paragraphs setting out the details of the case and leading to a final paragraph of formal proposals. Text references should give dates and page numbers in parentheses, e.g. 'Daudin (1800, p. 39) described . . .'. The Abstract will be prepared by the Secretariat.

References. These should be given for all authors cited. Where possible, ten or more relatively recent references should be given illustrating the usage of names which are to be conserved or given precedence over older names. The title of periodicals should be in full and be underlined; numbers of volumes, parts, etc. should be in arabic figures, separated by a colon from page numbers. Book titles should be underlined and followed by the number of pages and plates, the publisher and place of publication.

Submission of Application. Two copies should be sent to: The Executive Secretary, The International Commission on Zoological Nomenclature, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. It would help to reduce the time that it takes to process the large number of applications received if the typescript could be accompanied by a disk with copy in IBM PC compatible format, preferably in ASCII text. It would also be helpful if applications were accompanied by photocopies of relevant pages of the main references where this is possible.

The Commission's Secretariat is very willing to advise on all aspects of the formulation of an application.

On the proposed conservation as the correct spelling of *Cryptophagus* Herbst, 1792, *Dorcatoma* Herbst, 1792, *Rhizophagus* Herbst, 1793 and *Colon* Herbst, 1797 and the proposed conservation of *Lyctus bipustulatus* Fabricius, 1792 as the type species of *Rhizophagus* (Insecta, Coleoptera). R.G. Booth 256
On the proposed conservation of ELMIDAE Curtis, 1830 as the correct spelling and of the feminine gender of *Elmis* Latreille, 1802 (Insecta, Coleoptera). G.N. Foster . 257
On the proposed designation of the type species of *Hydrophoria* Robineau-Desvoidy, 1830 (Insecta, Diptera). C.W. Sabrosky; R.W. Crosskey 258
On the proposed conservation of *Sicus* Scopoli, 1763 and *Myopa* Fabricius, 1775 by the designation of *Conops buccata* Linnaeus, 1758 as the type species of *Myopa* (Insecta, Diptera), and on the proposed rejection of *Coenomyia* Latreille, 1796. C.W. Sabrosky; T.A. Wheeler 259
On the proposed conservation of the specific name of *Cliola* (*Hybopsis*) *topeka* Gilbert, 1884 (currently *Notropis topeka*) (Osteichthyes, Cypriniformes). R.L. Mayden; R.M. Bailey 262
On the proposed conservation of HEMIDACTYLIINI Hallowell, 1856 (Amphibia, Caudata). A. Dubois 264
On the proposed designation of a neotype for *Coelophysis bauri* (Cope, 1887) (Reptilia, Saurischia). S.G. Lucas & A.P. Hunt 265
On the proposed conservation of some mammal generic names first published in Brisson's (1762) *Regnum Animale*. J.E. Hill; D.W. Yalden; W.F.H. Ansell . . . 266

Rulings of the Commission

OPINION 1778. *Acineta* Ehrenberg, [1834] and *Tokophrya* Bütschli, 1889 (Ciliophora, Suctoria): conserved, and *Acineta tuberosa* Ehrenberg, [1834] and *Podophrya quadripartita* Claparède & Lachmann, 1859 (currently *Tokophrya quadripartita*): specific names conserved 268
OPINION 1779. *Potamolithus* Pilsbry & Rush, 1896 (Mollusca, Gastropoda): placed on the Official List with *Paludina lapidum* d'Orbigny, 1835 as the type species . 271
OPINION 1780. *Turbo politus* Linnaeus, 1758 (currently *Melanella polita*; Mollusca, Gastropoda): usage of the specific name conserved, so conserving the specific name of *Buccinum acicula* Müller, 1774 (currently *Cecilioides acicula*) 273
OPINION 1781. *Termes lacteus* Froggatt, 1898 (currently *Coptotermes lacteus*; Insecta, Isoptera): specific name conserved 275
OPINION 1782. *Corisa nigrolineata* Fieber, 1848 (currently *Sigara* (*Pseudovermicorixa*) *nigrolineata*; Insecta, Heteroptera): specific name conserved 277
OPINION 1783. *Aradus caucasicus* Kolenati, 1857 (Insecta, Heteroptera): syntype replaced by a neotype, so conserving the usage of the specific name and that of *A. hieroglyphicus* Sahlberg, 1878 279
OPINION 1784. *Buprestis* Linnaeus, 1758 and *Chrysobothris* Eschscholtz, 1829 (Insecta, Coleoptera): conserved by the designation of *Buprestis octoguttata* Linnaeus, 1758 as the type species of *Buprestis*, and *Chrysobothris* and *Dicerca* Eschscholtz, 1829: conserved as the correct original spellings 280
OPINION 1785. *Dytiscus biguttatus* Olivier, 1795 (currently *Agabus biguttatus*; Insecta, Coleoptera): specific name conserved 283
OPINION 1786. *Ascopora* Trautschold, 1876 (Bryozoa, Cryptostomata): *Ceriopora nodosa* Fischer von Waldheim, 1837 designated as the type species 285
OPINION 1787. *Mugil curema* and *M. liza* Valenciennes *in* Cuvier & Valenciennes, 1836 (Osteichthyes, Perciformes): specific names conserved 286
OPINION 1788. Scelidosaurus harrisonii Owen, 1861 (Reptilia, Ornithischia): lectotype replaced 288
OPINION 1789. Pseudoxyrhopus Günther, 1881 (Reptilia, Serpentes): conserved . 289
OPINION 1790. *Lagomeryx* Roger, 1904 (Mammalia, Artiodactyla): *Lagomeryx ruetimeyeri* Thenius, 1948 designated as the type species 290
OPINION 1791. *Procervulus* Gaudry, 1877 (Mammalia, Artiodactyla): *Antilope dichotoma* Gervais, 1849 designated as the type species 291

Information and Instructions for Authors 292

CONTENTS

Page

Notices 185
Fourth Edition of the International Code of Zoological Nomenclature 186
The International Code of Zoological Nomenclature 186
Official Lists and Indexes of Names and Works in Zoology — Second Supplement to 1990 186
Bulletin of Zoological Nomenclature — Back Copies 187
Bulletin of Zoological Nomenclature — Crustacea and Mollusca Offprints . . . 187
The European Association for Zoological Nomenclature 187

Conference Report

Report of the IUBS/IUMS exploratory meeting on harmonization between Codes of Nomenclature. Editors: D.L. Hawksworth, J. McNeill, P.H.A. Sneath, R.P. Trehane & P.K. Tubbs 188

Applications

Nesopupa Pilsbry, 1900 (Mollusca, Gastropoda): proposed conservation. R.H. Cowie, C.C. Christensen & N.L. Evenhuis 217
Acanthoteuthis Wagner *in* Münster, 1839 and *Kelaeno* Münster, 1842 (Mollusca, Cephalopoda): proposed conservation of usage. D.T. Donovan 219
Lironeca Leach, 1818 (Crustacea, Isopoda): proposed conservation as the correct spelling. E.H. Williams & T.E. Bowman 224
Oniscus asellus Linnaeus, 1758 (Crustacea, Isopoda): proposed designation of a neotype. D.T. Bilton 227
MEGALODONTIDAE Morris & Lycett, 1853 (Mollusca, Bivalvia) and MEGALODONTIDAE Konow, 1897 (Insecta, Hymenoptera): proposed removal of homonymy. N.D. Springate 230
Apis terrestris Linnaeus, 1758, *A. muscorum* Linnaeus, 1758 and *A. lucorum* Linnaeus, 1761 (currently *Bombus terrestris*, *B. muscorum* and *B. lucorum*) and *Bombus humilis* Illiger, 1806 (Insecta, Hymenoptera): proposed conservation of usage of the specific names. A. Løken, A. Pekkarinen & P. Rasmont 232
CAECILIIDAE Rafinesque-Schmaltz, 1814 (Amphibia, Gymnophiona) and CAECILIIDAE Kolbe, 1880 (Insecta, Psocoptera): proposed removal of the homonymy by the revocation of Opinion 1462 and the adoption of the spelling CAECILIUSIDAE for the psocopteran family name. M.H. Wake, A. Dubois, D.R. Frost, T.E. Moore & R.A. Nussbaum 237
PHRYNOBATRACHINAE Laurent, 1941 (Amphibia, Anura): proposed conservation. A. Dubois 240
Plesiosaurus rugosus Owen, 1840 (currently *Eretmosaurus rugosus*; Reptilia, Plesiosauria): proposed designation of a neotype. D.S. Brown & N. Bardet . . 247
Coluber poecilogyrus Wied-Neuwied, [1824] (currently *Liophis poecilogyrus*) (Reptilia, Serpentes): proposed conservation of the specific name. H.M. Smith, J.R. Dixon & V. Wallach 250
Psittacus banksii Latham, 1790 and *P. lathami* Temminck, 1807 (currently *Calyptorhynchus banksii* and *C. lathami*; Aves, Psittaciformes): proposed conservation of the specific names. R. Schodde & W.J. Bock 253

Comments

On the proposed conservation of the specific name of *Doris grandiflora* Rapp, 1827 (currently *Dendrodoris grandiflora*; Mollusca, Gastropoda). R.C. Willan & R. Burn 256

Continued on Inside Back Cover

Printed in Great Britain by Henry Ling Ltd., at the Dorset Press, Dorchester, Dorset

Volume 51, Part 4, 20 December 1994 pp. 293–364 ISSN 0007-5167

NATURAL HISTORY MUSEUM
23 DEC 1994
PURCHASED
ZOOLOGY LIBRARY

The Bulletin of Zoological Nomenclature

ICZN The Official Periodical of the International Commission on Zoological Nomenclature

THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

The *Bulletin* is published four times a year for the International Commission on Zoological Nomenclature by the International Trust for Zoological Nomenclature, a charity (no. 211944) registered in England. The annual subscription for 1994 is £85 or $165, postage included; the rate for 1995 will be £88 or $170. All manuscripts, letters and orders should be sent to:

The Executive Secretary,
International Commission on Zoological Nomenclature,
c/o The Natural History Museum,
Cromwell Road,
London, SW7 5BD, U.K. (Tel. 071-938 9387)

INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Officers

President	Prof Dr O. Kraus (*Germany*)
Vice-President	Dr H. G. Cogger (*Australia*)
Secretary-General	Dr I. W. B. Nye (*United Kingdom*)
Executive Secretary	Dr P. K. Tubbs (*United Kingdom*)

Members

Dr F. M. Bayer (*U.S.A.: Corallia*)
Prof W. J. Bock (*U.S.A.; Ornithology*)
Dr P. Bouchet (*France; Mollusca*)
Dr L. R. M. Cocks (*U.K.; Brachiopoda*)
Dr H. G. Cogger (*Australia; Herpetology*)
Prof J. O. Corliss (*U.S.A.; Protista*)
Prof C. Dupuis (*France; Heteroptera*)
Prof Dr G. Hahn (*Germany; Trilobita*)
Prof Dr O. Halvorsen (*Norway; Parasitology*)
Mr D. Heppell (*U.K.; Mollusca*)
Prof L. B. Holthuis (*The Netherlands; Crustacea*)
Dr Z. Kabata (*Canada; Copepoda*)
Prof Dr O. Kraus (*Germany; Arachnology*)
Dr P. T. Lehtinen (*Finland; Arachnology*)
Dr E. Macpherson (*Spain; Crustacea*)
Dr V. Mahnert (*Switzerland; Ichthyology*)
Prof U. R. Martins de Souza (*Brazil; Coleoptera*)
Prof A. Minelli (*Italy; Myriapoda*)
Dr C. Nielsen (*Denmark; Bryozoa*)
Dr I. W. B. Nye (*U.K.; Lepidoptera*)
Prof W. D. L. Ride (*Australia; Mammalia*)
Prof J. M. Savage (*U.S.A; Herpetology*)
Prof Dr R. Schuster (*Austria; Acari*)
Dr Y. I. Starobogatov (*Russia; Mollusca*)
Dr P. Štys (*Czech Republic; Heteroptera*)
Dr F. C. Thompson (*U.S.A.; Diptera*)
Dr V. A. Trjapitzin (*Russia; Hymenoptera*)
Dr Shun-Ichi Uéno (*Japan; Entomology*)
Prof A. Willink (*Argentina; Hymenoptera*)

Secretariat

Dr P. K. Tubbs (*Executive Secretary and Editor*)
Mr J. D. D. Smith, B.Sc., B.A. (*Scientific Administrator*)
Mrs A. Gentry, B.Sc. (*Zoologist*)

Officers of the International Trust for Zoological Nomenclature

Dr S. Conway Morris, F.R.S. (*Chairman*)
Dr M. K. Howarth (*Secretary and Managing Director*)

© International Trust for Zoological Nomenclature 1994

THE NATURAL HISTORY MUSEU
23 DEC 1994
293
PURCHASED
ZOOLOGY LIBRA

BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 51, part 4 (pp. 293–364) 20 December 1994

Notices

(a) *Invitation to comment.* The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles.* At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications.* The following new applications have been received since going to press for volume 51, part 3 (published on 30 September 1994). Under Article 80 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) *Anomalina* d'Orbigny, 1826 (Foraminiferida): proposed designation of *A. ariminensis* d'Orbigny in Fornasini, 1902 as the type species. (Case 2906). S.A. Revets.

(2) *Eophacops* Delo, 1935 and *Acernaspis* Campbell, 1967 (Trilobita): proposed conservation. (Case 2944). R.M. Owens & A.T. Thomas.

(3) *Melissodes desponsa* Smith, 1854 and *M. agilis* Cresson, 1878 (Insecta, Hymenoptera): proposed conservation of the specific names. (Case 2945). W.E. LaBerge.

(4) PLUTONIINAE Bollman, 1893 (Arthropoda, Chilopoda) and PLUTONIINAE Cockerell, 1893 (Mollusca, Gastropoda): proposed removal of the homonymy. (Case 2946). R.M. Shelley & T. Backeljau.

(5) *Patella longicosta* Lamarck, 1819 (Mollusca, Gastropoda): proposed conservation of the specific name. (Case 2947). D.G. Herbert.

(6) *Turrilites gravesianus* d'Orbigny, 1842 (currently *Hypoturrilites gravesianus*; Mollusca, Ammonoidea): proposed conservation of the specific name and designation of a replacement lectotype; *Turrilites tuberculatus* Bosc, 1801 (currently *Hypoturrilites tuberculatus*): proposed designation of a neotype. (Case 2948). W.J. Kennedy & C.W. Wright.

(7) *Aplysia juliana* Quoy & Gaimard, 1832 (Mollusca, Gastropoda): proposed precedence over *Aplysia sorex* Rang, 1828. (Case 2949). E. Martínez & J. Ortea.

(8) *Gasteruption pedunculatum* Schletterer, 1889 (currently *Pseudofoenus pedunculatus*; Insecta, Hymenoptera): proposed designation of a neotype. (Case 2950). A.D. Austin, J.T. Jennings & M.S. Harvey.

(9) *Nectria* Gray, 1840 (Echinodermata, Asteroidea): proposed designation of *Nectria ocellata* Perrier, 1875 as the type species. (Case 2951). W. Zeidler.

(10) *Paraphronima crassipes* Claus, 1879 (Crustacea, Amphipoda): proposed conservation of the specific name. (Case 2952). W. Zeidler.

(11) *Loris* E. Geoffroy Saint-Hilaire, 1796 (Mammalia, Primates): proposed conservation. (Case 2953). A. Gentry, C.P. Groves, J.E. Hill & P.D. Jenkins.

(d) *Ruling of the Commission.* Each Opinion, Declaration or Direction published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin.*

Fourth Edition of the International Code of Zoological Nomenclature

Recent issues of the *Bulletin* have referred to the availability of a discussion draft of a new edition of the Code. However, the final stages of the preparation of this draft have been held up and it is still not available for distribution. As soon as the draft is ready copies will be sent without charge to all subscribers to the *Bulletin* and to members of the American and European Associations for Zoological Nomenclature. Any other institution or individual may order a copy from the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD. The cost of printing and postage is about £3 or US$5. Bank charges on currency exchange make it uneconomic to pay this amount except in sterling or US dollars. The draft of the Code will therefore be sent free of charge, but those able to pay in sterling or US dollars are asked to enclose a cheque for £3 or US$5 to cover the cost.

Before completing the definitive text of the Fourth Edition, the Commission will (in accordance with Article 16 of its Constitution) take into account all comments and suggestions on the draft submitted within one year of its original distribution.

The International Code of Zoological Nomenclature

The Third Edition (published 1985) supersedes all earlier versions and incorporates many changes.

Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., c/o NHB Stop 163, National Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £19 or $35, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £15 or $29; payment should accompany orders.

Official Lists and Indexes of Names and Works in Zoology — Second Supplement to 1990

The Official Lists and Indexes of Names and Works in Zoology was published in 1987. This book gives details of all the names and works on which the Commission has ruled since it was set up in 1895; there are about 9900 entries.

Copies can be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., c/o NHB Stop 163, National Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £60 or $110, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £40 or $75; payment should accompany orders.

In the five years 1986–1990, 946 names and five works were added to the Official Lists and Official Indexes. A supplement has been prepared giving these additional entries, together with some amendments and updatings to entries in the 1987 volume. Copies can be obtained without charge from either of the above addresses.

Bulletin of Zoological Nomenclature — Back Copies

Back copies of all the volumes of the *Bulletin*, and of most volumes of the *Opinions and Declarations* that were published concurrently with vols. 1–16 of the *Bulletin*, are still available. Prices on application to I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.

Bulletin of Zoological Nomenclature — Crustacea and Mollusca Offprints

The International Trust for Zoological Nomenclature is offering a subscription for individual zoologists wishing to receive offprints of all cases in particular disciplines. For an annual payment of £15 or $25 subscribers will receive copies of all Applications, Comments and Opinions relating to either the Crustacea or Mollusca as soon as they are published in the *Bulletin of Zoological Nomenclature*. Offprints are available back to 1980.

Orders for offprints relating to either the Crustacea or the Mollusca should be sent to I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K., with payment at the rate of £15 or $25 for each year requested.

The European Association for Zoological Nomenclature

The European Association for Zoological Nomenclature has been established to facilitate liaison between European zoologists and the Commission, and to support the Commission's work. Members will receive a yearly Newsletter with information on the activities of the Association and Commission, and will be able to buy the *Code* and the *Official Lists and Indexes* at substantial discounts.

The Association's President is Dr V. Mahnert (Switzerland), the Vice-President Dr I.M. Kerzhner (Russia), the Secretary Dr E. Macpherson (Spain) and the Treasurer Dr M.A. Alonso-Zarazaga (Spain). Other members of the Inaugural Council are Dr H.M. André (Belgium), Dr J.-P. Hugot (France), Prof. A. Minelli (Italy) and Dr C. Nielsen (Denmark). Membership of the Association is open to all European zoologists; further details can be obtained from Dr M.A. Alonso-Zarazaga, Museo Nacional de Ciencias Naturales, José Gutiérrez Abascal 2, 28006 Madrid, Spain.

International Trust for Zoological Nomenclature

Financial Report for 1993

The Trust's deficit of £1,450 in 1993 is a considerable reduction on the deficits of £4,328 and £8,112 for 1992 and 1991 respectively, and is an acceptable balance between income and expenditure for the year. It was achieved, however, with the Secretariat reduced to three members of staff. With the increased workload involved in the preparation of the 4th edition of the *International Code of Zoological Nomenclature*, such a small staff is barely viable and some part-time help had to be engaged.

Half the Trust's income came from sales of publications, mainly from the *Bulletin of Zoological Nomenclature* which yielded an income of £28,001. Sales of the *Official Lists and Indexes* and the *International Code of Zoological Nomenclature* brought the total from publications to £31,456. Income from grants remained at £9,000, but the £12,937 received from donations was £2,332 more than in 1992. Investment interest of £8,772 was £1,305 less than in 1992, reflecting the continuing fall in interest rates. The total income for the year was £62,165.

The main expenditure of the Trust in 1993 was £51,540 for the salaries and National Insurance of the Secretariat of the International Commission on Zoological Nomenclature, together with fees for part-time staff. Printing of the *Bulletin of Zoological Nomenclature* and distribution of all publications amounted to £9,193. Other costs for office expenses (£1,837), depreciation of office equipment (£295) and audit fee (£750) brought the total expenditure to £63,615.

The Editorial Committee preparing the 4th edition of the *Code* met in Hamburg in October, and their expenses were met by generous grants from Hamburgische Wissenschaftliche Stiftung, Behörde für Wissenschaft und Forschung, Hochschulamt, and Stiftungen bei der Universität Hamburg, whom we thank.

A large number of donations, totalling £966, were received in memory of Mr R.V. Melville (former Secretary of the Commission) who died in March 1993. These are being put towards the cost of a Centenary History of the Commission written by Mr Melville, to be published in 1995, and do not figure in the 1993 accounts.

The Commission Secretariat was again housed in The Natural History Museum, whom we thank for their continuing support. The Trust wishes to express its thanks to all the donors listed below who contributed to support of the Commission during the year. Continuing support of this kind is vital if the Commission is to carry out its work for the international zoological and palaeontological community.

M.K. HOWARTH
Secretary and Managing Director
6 June 1994

List of donations and grants received during the year 1993

Agricultural and Food Research Council, U.K.	£2,000
American Association for Zoological Nomenclature	£5,383
W. Ansell	£5
Australian Museums	£256
British Ornithologists Union	£200

Freshwater Biological Association, U.K.	£5
Lynx Promocions, Spain	£19
Malacological Society, U.K.	£200
Mammal Society, U.K.	£50
Marine Biological Association, U.K.	£150
Medical Research Council, U.K.	£2,000
Natural Environment Research Council, U.K.	£2,000
Nuffield Foundation	£1,000
Palaeontological Association, U.K.	£250
Royal Danish Academy of Sciences	£605
Royal Entomological Society of London	£300
Royal Society of London	£1,000
St John's College, Cambridge	£200
Science and Engineering Research Council, U.K.	£2,000
South African Entomological Society	£100
Stockholm Natural History Museum	£450
Swedish Natural Science Research Council	£1,000
Swiss National Research Foundation	£2,000
Academia Sinica, Taiwan	£128
Zoological Societies of Japan	£646
Total	£21,937

INTERNATIONAL TRUST FOR ZOOLOGICAL NOMENCLATURE INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 1993

Income		
SALE OF PUBLICATIONS		
Bulletin of Zoological Nomenclature	£28,001	
International Code of Zoological Nomenclature	2,760	
Official Lists and Indexes	695	
		31,456
GRANTS AND DONATIONS		21,937
BANK AND INVESTMENT INTEREST		8,772
		62,165
Expenditure		
SALARIES, NATIONAL INSURANCE AND FEES	51,540	
OFFICE EXPENSES	1,837	
AUDIT FEE	750	
PRINTING AND DISTRIBUTION OF PUBLICATIONS	9,193	
DEPRECIATION OF OFFICE EQUIPMENT	295	
		63,615
Deficit for the year		1,450

Case 2888

Valdivianemertes Stiasny-Wijnhoff, 1923 (Nemertea): proposed conservation

Frank B. Crandall

Turkey Run Research Institute, 900 Turkey Run Road, McLean, Virginia 22101–1700, U.S.A.

Abstract. The purpose of this application is to conserve the nemertean generic name *Valdivianemertes* Stiasny-Wijnhoff, 1923, which is threatened by the senior objective synonym *Akrostomum* Grube, 1840. *Akrostomum* has not been mentioned, except as a synonym, for more than 100 years.

---

1. The genus *Akrostomum* Grube, 1840 (p. 57) was originally established for the new nominal species *A. stannii*. The description was based upon a single preserved specimen from the Mediterranean; it clearly referred to a nemertean (and most probably a monostiliferan), but was so indeterminate that the name was listed as a nomen dubium by Gibson & Crandall (1989). However, the holotype still exists (see para. 4 below).

2. The taxon was listed uncertainly by Örsted (1843, 1844) as *Acrostomum* [sic] *stannii*, and by Diesing (1850, 1862) as *Acrostomum Stannii*. Carus (1885) also listed *A. stannii* as dubious, and suggested that *Amphiporus hastatus* McIntosh, 1873 and *Amphiporus pugnax* Hubrecht, 1879 possibly belonged to the doubtful genus '*Acrostomum*'. Hubrecht (1879) listed *A. stannii* as a synonym of *Amphiporus hastatus*, but later (1883) listed *Amphiporus hastatus* and *bioculatus* McIntosh, 1873 as synonyms of *Akrostomum stannii*. Joubin (1890, 1894) also listed *Akrostomum stannii* as a synonym of *Amphiporus hastatus*, and also (1894) used Carus's exact words (without attribution) to suggest that *Amphiporus pugnax* might belong to *Acrostomum* [sic]. Vaillant (1890, p. 601) listed *Akrostomum stannii* as a 'species indeterminata', questioning whether it was even a nemertean and (p. 609) mentioned Hubrecht's suggested synonymies. None of these authors added any new information, and all of these synonymies have been universally rejected for the past 100 years. *Amphiporus bioculatus* (sensu McIntosh), *A. hastatus* and *A. pugnax* are now regarded (Gibson & Crandall, 1989) as nomina dubia.

3. There is only one other instance of the adoption of the generic name *Akrostomum* or *Acrostomum* for a species. Diesing (1862) reported *Polia canescens* (Leuckart, 1849) as *Acrostomum canescens* but Bürger (1904) transferred this taxon to *Amphiporus* Ehrenberg, 1831. Gibson & Crandall (1989) regarded *A. canescens* as a nomen dubium.

4. Bürger was able to compare a preserved collection of specimens from Naples with Grube's fragmented specimen of *Akrostomum stannii* contained in the Berlin Natural History Museum collections, and satisfied himself that they were the same species. The specimen remains in Berlin, where it is listed as *Amphiporus stannii* (No. 1962, Holotype). Bürger published (1895a, b) a considerably expanded description of

the taxon under the name *Amphiporus staniusi*. His altered spelling of the specific name possibly resulted from confusion over the proper latinized form of the personal name but he later (1904) corrected it to *Amphiporus stannii*, listing all the earlier names as synonyms. His placement of the species in the older genus *Amphiporus* was entirely consistent with *Amphiporus* as understood at that time but not as more recently treated by Gibson & Crandall (1989, 1991), that is with *Planaria lactiflorea* Johnston, 1828 as the type species (see *BZN* **48**: 22–24 & Opinion 1675, *BZN* **49**: 157).

5. Stiasny-Wijnhoff (1923), with insight gained through extensive studies of new expedition collections, recognized that *Amphiporus stannii*, as described by Bürger (1895a, b), and another species obtained from South Africa which Bürger (1909) had described as *Drepanophorus valdiviae*, were very closely related and so unique as to require a new genus, which she (1923, p. 643) called *Valdivianemertes*. No type material of *D. valdiviae* is known to exist. Stiasny-Wijnhoff did not designate a type species or family placement for *Valdivianemertes*, although she noted that *stannii* and *valdiviae* belong to the monostilifera. She did not mention the earlier name *Akrostomum*.

6. *Valdivianemertes* was later accepted by Friedrich (1935, 1955, 1957), Stiasny-Wijnhoff (1936), Kirsteuer (1963, 1973), Gibson (1972, 1982, 1988), Gibson & Crandall (1989) and Crandall (1993a, 1993b).

7. In a review of the genus *Valdivianemertes*, I have noted (1993a) that the generic name *Akrostomum* has not been used, except as a synonym, for over 100 years, and that *Valdivianemertes* is the name by which the genus has been recognized and understood since 1923. I retained the name *Valdivianemertes* in accordance with Article 23b of the Code, designated (p. 181) *Akrostomum stannii* Grube, 1840 as the type species, and assigned (p. 183) the genus to the family CRATENEMERTIDAE Friedrich, 1968 (p. 35) since it conforms to that diagnosis.

8. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the generic name *Akrostomum* Grube, 1840 for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Generic Names in Zoology the name *Valdivianemertes* Stiasny-Wijnhoff, 1923 (gender: feminine), type species by designation by Crandall (1993) *Akrostomum stannii* Grube, 1840;

(3) to place on the Official List of Specific Names in Zoology the name *stannii* Grube, 1840, as published in the binomen *Akrostomum stannii* (specific name of the type species of *Valdivianemertes* Stiasny-Wijnhoff, 1923);

(4) to place on the Official Index of Rejected and Invalid Names in Zoology the following names:

(a) *Akrostomum* Grube, 1840, as suppressed in (1) above;

(b) *Acrostomum* Örsted, 1843 (an incorrect subsequent spelling of *Akrostomum* Grube, 1840).

References

Bürger, O. 1895a. Die Nemertinen des Golfes von Neapel und der Angrenzenden Meeres-Abschnitte. *Fauna und Flora des Golfes von Neapel*, **22**: 1–743.

Bürger, O. 1895b. Beitrage zur Anatomie, Systematik und geographischen Verbreitung der Nemertinen. *Zeitschrift für Wissenschaftliche Zoologie*, **61**: 16–37.

Bürger, O. 1904. Nemertini. *Das Tierreich*, **20**: 1–151.

Bürger, O. 1909. Die Nemertinen. *Wissenschaftliche Ergebnisse der Deutschen Tiefsee-Expedition auf dem Dampfer* Valdivia *1898–1899*, **20**: 171–221.

Carus, J.V. 1885. *Prodromus Faunae Mediterraneae sive descriptio animalium maris mediterranei...*, vol. 1 (Coelenterata, Echinodermata, Vermes, Arthropoda). 524 pp. Koch, Stuttgart.

Crandall, F.B. 1993a. The genus *Valdivianemertes* Stiasny-Wijnhoff 1923 (Nemertea, Enopla, Hoplonemertea): its nomenclatural status and proper systematic position. *Hydrobiologia*, **266**: 175–184.

Crandall, F.B. 1993b. Major taxonomic characters and enoplan systematics. *Hydrobiologia*, **266**: 115–140.

Diesing, K.M. 1850. *Systema Helminthum*, vol. 1. 679 pp. Braumüller, Vindobonae.

Diesing, K.M. 1862. Revision der Turbellarien. *Sitzungberichte Akademie der Wissenschaften Wien, Mathematisch- Naturwissenschaftliche Klasse*, **45**: 198–307.

Ehrenberg, C.G. 1828, 1831. Phytozoa turbellaria Africana et Asiatica in Phytozoorum Tabula IV et V delineata. (Pp. 53-67 *in*: *Animalia evertebrata exclusis insectis*. 126 pp. Plates published in 1828, text in 1831). *In*: Hemprich, P.C. & Ehrenberg, C.G. (Eds.), 1828–1845. *Symbolae Physicae, seu icones et descriptiones Corporum Naturalium novorum ... Pars Zoologica*. Officina Academica, Berolina.

Friedrich, H. 1935. Studien zur Morphologie, Systematik und Okologie der Nemertinen der Kieler Bucht. *Archiv für Naturgeschichte*, **4**: 293–375.

Friedrich, H. 1955. Beitrage zu einer Synopsis der Gattung der Nemertini monostilifera nebst Bestimmungsschlussel. *Zeitschrift für Wissenschaftliche Zoologie*, **158**: 133–192.

Friedrich, H. 1957. Beitrage zur Kenntnis der Arktischen Hoplonemertinen. *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kjobenhavn*, **119**: 129–154.

Friedrich, H. 1968. *Sagaminemertes*, eine bemerkenschwerte neue Gattung der Hoplonemertinen und ihre systematische Stellung. *Zoologischer Anzeiger*, **180**: 33–36.

Gibson, R. 1972. *Nemerteans*. 244 pp. Hutchinson, London.

Gibson, R. 1982. Nemertea. Pp. 823–846 *in* Parker, S.P. (Ed.), *Synopsis and classification of living organisms*, vol. 1. McGraw-Hill, New York.

Gibson, R. 1988. Evolutionary relationships between mono- and polystiliferous hoplonemerteans: *Nipponnemertes* (Cratenemertidae), a 'missing link' genus? *Hydrobiologia*, **156**: 61–74.

Gibson, R. & Crandall, F.B. 1989. The genus *Amphiporus* Ehrenberg, 1831 (Nemertea, Enopla, Monostiliferoidea). *Zoologica Scripta*, **18**: 453–470.

Gibson, R. & Crandall, F.B. 1991. *Amphiporus* Ehrenberg (Nemertea): proposed designation of *Planaria lactiflorea* Johnston, 1828 as the type species. *Bulletin of Zoological Nomenclature*, **48**(1): 22–24.

Grube, A.E. 1840. *Actinien, Echinodermen und Würmer des Adriatischen- und Mittelmeers*. 92 pp. Bon, Königsberg.

Hubrecht, A.A.W. 1879. The genera of European nemerteans critically revised, with description of several new species. *Notes from the Leyden Museum*, **1**(4): 193–232.

Hubrecht, A.A.W. 1883. On the ancestral form of the Chordata. *Quarterly Journal of Microscopical Science*, **23**: 349–368.

Joubin, L. 1890. Recherches sur les Turbellaires des côtes de France (Nemertes). *Archives de Zoologie Experimental et Generale*, (2)**8**: 461–602.

Joubin, L. 1894. Les Némertiens. Pp. 1–235 *in* Blanchard, R. & Guerne, J. de (Eds.), *Fauna Française*. Société d'Éditions Scientifiques, Paris.

Kirsteuer, E. 1963. Beiträge zur Kenntnis der Systematik und Anatomie der adriatischen Nemertinen (Genera *Tetrastemma*, *Oerstedia*, *Oerstediella*). *Zoologische Jahrbücher* (Abteilung für Anatomie und Ontogenie der Tiere), **80**: 555–616.

Kirsteuer, E. 1973. A new polystiliferous hoplonemertean, *Curranemertes natans* gen. et sp. n., from the Caribbean Sea (Nemertina, Polystilifera, Reptantia). *Zoologica Scripta*, **2**: 125–140.

McIntosh, W.C. 1873. *A monograph of the British annelids*, part 1 (The nemerteans). Pp. i–xiii, 1–96, pls. 1–10. Ray Society, London.

Örsted, A.S. 1843. *Naturhistorisk Tidsskrift* (Udgivet af H. Krøyer) Ræk. 1, 1837–1843, Bd. 4. Kjøbenhavn.

Örsted, A.S. 1844. *Entwurf einer systematischen Eintheilung und speciellen Beschreibung der Plattwürmer, auf microscopische Untersuchungen gegründet*. 96 pp. Reitzel, Copenhagen.

Stiasny-Wijnhoff, G. 1923. On Brinkmann's system of the Nemertea Enopla and *Sibogaenemertes weberi* n. gen. n. sp. *Quarterly Journal of Microscopical Science*, **67**: 627–669.

Stiasny-Wijnhoff, G. 1936. Die Polystilifera der Siboga Expedition. Monographie 22, 214 pp. *in*: *Uitkomsten op Zoologisch, Botanisch, Oceanographisch en Geologisch ge beid verzameld in Nederlandsch Oost-Indie 1899–1900*. Brill, Leiden.

Vaillant, L. 1890. Lombriciniens, Hirudiniens, Bdellomorphes, Teretulariens et Planariens. *Histoire Naturelle des Animaux Marins et d'Eau Douce*, **3**(2): 341–768.

Case 2908

Vejdovskyella Michaelsen, 1903 (Annelida, Oligochaeta): proposed precedence over *Macrochaetina* Bretscher, 1899

Tarmo Timm

Vôrtsjärv Limnological Station, EE2454 Rannu, Tartumaa, Estonia

Abstract. The purpose of this application is to maintain the usage of the generic name *Vejdovskyella* Michaelsen, 1903 (family NAIDIDAE) by giving it precedence over the senior subjective synonym *Macrochaetina* Bretscher, 1899, which has not been used for over 60 years.

---

1. Vejdovský (1883, p. 218) described the oligochaete genus *Bohemilla* with a new single included species *B. comata* (type species by monotypy). Michaelsen (1903, p. 184) proposed a replacement generic name *Vejdovskyella* as *Bohemilla* was already in use for a trilobite genus, *Bohemilla* Barrande, 1872. Later Strand (1928, p. 36), unaware of this replacement name, proposed the new name *Bohemillula* for *Bohemilla* Vejdovský.

2. Bretscher (1896, p. 509) described the genus *Macrochaeta* for his new species *M. intermedia* (type species by monotypy). Later, Bretscher (1899, p. 392) modified his name to *Macrochaetina* as the original version was preoccupied (by *Macrochaeta* Grube, 1850, Polychaeta, although he did not say so).

3. Piguet (1928, p. 86) believed that the two species *M. intermedia* and *B. comata* belonged to the same genus. Contrary to the principle of priority, he chose *Vejdovskyella* Michaelsen, 1903 as the valid name. Since then the name *Vejdovskyella* has been in constant use, including the monograph on the NAIDIDAE by Sperber (1948, p. 137). Several new species have been described under the name *Vejdovskyella* and many faunistic and ecological papers have used it as valid (e.g. Brinkhurst & Jamieson, 1971; Chekanovskaya, 1981; Ohtaka, 1985; a list of a further seven papers by different authors is held by the Commission Secretariat). *Macrochaetina* has remained unused.

4. Reinstatement of the senior subjective synonym *Macrochaetina* Bretscher, 1899 over the widely used name *Vejdovskyella* Michaelsen, 1903 would cause confusion and instability.

5. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to give precedence to the name *Vejdovskyella* Michaelsen, 1903 over the name *Macrochaetina* Bretscher, 1899, whenever the two are considered to be synonyms;

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Vejdovskyella* Michaelsen, 1903 (gender: feminine), type species by monotypy of the replaced nominal genus *Bohemilla* Vejdovský, 1883, *Bohemilla comata* Vejdovský, 1883, with the endorsement that it is to be given

precedence over *Macrochaetina* Bretscher, 1899 whenever the two names are considered to be synonyms;

(b) *Macrochaetina* Bretscher, 1899 (gender: feminine), type species by monotypy of the replaced nominal genus *Macrochaeta* Bretscher, 1896, *Macrochaeta intermedia* Bretscher, 1896, with the endorsement that it is not to be given priority over *Vejdovskyella* Michaelsen, 1903 whenever the two names are considered to be synonyms;

(3) to place on the Official List of Specific Names in Zoology the following names:

(a) *comata* Vejdovský, 1883, as published in the binomen *Bohemilla comata* (specific name of the type species of *Vejdovskyella* Michaelsen, 1903);

(b) *intermedia* Bretscher, 1896, as published in the binomen *Macrochaeta intermedia* (specific name of the type species of *Macrochaetina* Bretscher, 1899);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:

(a) *Bohemilla* Vejdovský, 1883 (a junior homonym of *Bohemilla* Barrande, 1872 and a senior objective synonym of *Vejdovskyella* Michaelsen, 1903);

(b) *Bohemillula* Strand, 1928 (a junior objective synonym of *Vejdovskyella* Michaelsen, 1903);

(c) *Macrochaeta* Bretscher, 1896 (a junior homonym of *Macrochaeta* Grube, 1850 and a senior objective synonym of *Macrochaetina* Bretscher, 1899).

References

Bretscher, K. 1896. Die Oligochaeten von Zürich. *Revue Suisse de Zoologie*, **3**(4): 499–532.

Bretscher, K. 1899. Beitrag zur Kenntnis der Oligochaeten-Fauna der Schweiz. *Revue Suisse de Zoologie*, **6**(2): 369–426.

Brinkhurst, R.O. & Jamieson, B.G.M. 1971. *Aquatic Oligochaeta of the world.* 860 pp. Oliver & Boyd, Edinburgh.

Chekanovskaya, O.V. 1981. *Aquatic Oligochaeta of the U.S.S.R.* 513 pp. Amerind, New Delhi.

Michaelsen, W. 1903. Hamburgische Elb-Untersuchung. IV. Oligochaeten. *Mitteilungen aus dem Naturhistorischen Museum in Hamburg*, **19**(2): 169–210.

Ohtaka, A. 1985. Taxonomical studies of the Japanese Naididae (Annelida, Oligochaeta). 1. *Journal of the Faculty of Science, Hokkaido University*, (Series 6, Zoology) **24**(2): 113–121.

Piguet, E. 1928. Sur quelques Oligochètes de l'Amérique du sud et d'Europe. *Bulletin de la Société Neuchâteloise des Sciences Naturelles*, (n.s.)**52**(1): 78–101.

Sperber, C. 1948. A taxonomical study of the Naididae. *Zoologiska Bidrag från Uppsala*, **28**: 1–296.

Strand, E. 1928. Miscellanea nomenclatorica zoologica et palaeontologica I-II. *Archiv für Naturgeschichte*, **92**A(8): 30–75.

Vejdovský, F. 1883. Revisio Oligochaetorum Bohemiae. *Sitzungsberichte der Königlichen Böhmischen Gesellschaft der Wissenschaften* (Prag), **1883**: 215–228.

Case 2896

Scottia Brady & Norman, 1889 (Crustacea, Ostracoda): proposed designation of *Scottia pseudobrowniana* Kempf, 1971 as the type species

Eugen K. Kempf

Geological Institute, University at Cologne, Zuelpicher Str. 49, D-50674 Köln, Germany

Abstract. The purpose of this application is to designate *Scottia pseudobrowniana* Kempf, 1971 as the type species of the ostracod genus *Scottia* Brady & Norman, 1889. The genus was originally based on *S. pseudobrowniana*, the only known living European species, but the specimens were at that time misidentified as *S. browniana* (Jones, 1850), a species known only in the fossil state.

---

1. Jones (1850, p. 25) described *Cypris browniana* from Pleistocene freshwater deposits at Clacton, Essex, England.

2. Brady (1887, p. 330) reported living specimens of '*Cypris browniana* Jones' from pools by the side of Loch Fadd, Isle of Bute, Scotland. His determination of these specimens was solely based on comparison with the figures given by Jones ([1857], pl. 1, figs. 1 & 2) for *Cypris browniana* and *Cypris browniana tumida*.

3. Brady & Norman (1889, p. 72, pl. 9, figs. 23 & 24, pl. 11, figs. 19–25) established the new genus *Scottia*. Only one species was assigned to the genus, namely *Cypris browniana* Jones, 1850, so this is the type species by monotypy. The descriptions given by Brady & Norman for the genus *Scottia* and for *S. browniana* were entirely based on the living material from the Isle of Bute. Their illustrations included not only two figures of a female carapace but also eight figures of soft parts of a male animal. Fossil occurrences were mentioned only by citing the paper of Jones ([1857], originally cited as 1856 but actually published in February, 1857).

4. I (Kempf, 1971) published a monographic revision of all living and fossil representatives of the genus *Scottia* then known from Europe. With the aid of colleagues at the Natural History Museum in London it was not only possible to trace the extant specimens from the Isle of Bute (Brady, 1887; Brady & Norman, 1889) deposited in the Department of Zoology, but also the Pleistocene specimens from Clacton (Jones, 1850, [1857]), deposited in the Department of Palaeontology. The main result of this revision was the discovery that the extant specimens from the Isle of Bute are congeneric but not conspecific with the Pleistocene specimens of *Scottia browniana* (Jones, 1850) from Clacton. I consequently used these Isle of Bute specimens to describe (p. 45) the new species *S. pseudobrowniana* Kempf, 1971, the holotype being BM(NH) Zoology Department no. 1900–3–6–35A.

5. The separation of *Scottia pseudobrowniana* Kempf, 1971 from *Scottia browniana* (Jones, 1850) has been widely accepted by other ostracodologists (e.g. Absolon, 1973; De Deckker, 1980; Diebel & Pietrzeniuk, 1977 & 1984; Meisch, 1987; Henderson, 1990; a list of 24 references is held by the Commission Secretariat and

a further detailed list of literature citations is noted in Kempf, 1980, 1991 and in preparation).

6. In accordance with Article 70b of the Code the case is referred to the Commission. I propose the designation of *S. pseudobrowniana* Kempf, 1971 as the type species of *Scottia* Brady & Norman, 1889 since this taxon was that actually involved, but wrongly identified, when the nominal genus was established.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type species for the nominal genus *Scottia* Brady & Norman, 1889, and to designate *Scottia pseudobrowniana* Kempf, 1971 as the type species;

(2) to place on the Official List of Generic Names in Zoology the name *Scottia* Brady & Norman, 1889 (gender: feminine), type species by designation in (1) above *Scottia pseudobrowniana* Kempf, 1971;

(3) to place on the Official List of Specific Names in Zoology the name *pseudobrowniana* Kempf, 1971, as published in the binomen *Scottia pseudobrowniana* (specific name of the type species of *Scottia* Brady & Norman, 1889).

References

Absolon, A. 1973. Ostracoden aus einigen Profilen spät- und postglazialer Karbonatablagerungen in Mitteleuropa. *Mitteilungen der Bayerischen Staatssammlung für Paläontologie und Historische Geologie*, **13**(1): 47–94.

Brady, G.S. 1887. Notes on Entomostraca. *Annual Report of the Fishery Board for Scotland*, Appendix F, No. 11, **5**: 328–330.

Brady, G.S. & Norman, A.M. 1889. A monograph of the marine and freshwater Ostracoda of the North Atlantic and of North-Western Europe. Section I. Podocopa. *Scientific Transactions of the Royal Dublin Society*, (2)**4**(2): 63–270.

De Deckker, P. 1980. On *Scottia audax* (Chapman). *Stereo-Atlas of Ostracod Shells*, **7**(8): 37–44.

Diebel, K. & Pietrzeniuk, E. 1977. Ostracoden aus dem Travertin von Taubach bei Weimar. *Quartärpaläontologie*, **2**: 119–137.

Diebel, K. & Pietrzeniuk, E. 1984. Jungpleistozäne Ostrakoden aus Sedimenten der Parkhöhlen von Weimar. *Quartärpaläontologie*, **5**: 285–319.

Henderson, P.A. 1990. Freshwater ostracods keys and notes for the identification of the species. *Synopses of the British Fauna*, (N.S.)**42**: 1–228.

Jones, T.R. 1850. Description of the Entomostraca of the Pleistocene beds of Newbury, Copford, Clacton and Grays. *Annals and Magazine of Natural History*, (2)**6**: 25–28.

Jones, T.R. [1857]. A monograph of the Tertiary Entomostraca of England. *Palaeontographical Society (Monographs)*, **9**: 1–68.

Kempf, E.K. 1971. Ökologie, Taxonomie und Verbreitung der nichtmarinen Ostrakoden-Gattung *Scottia* im Quartär von Europa. *Eiszeitalter und Gegenwart*, **22**: 43–63.

Kempf, E.K. 1980. Index and bibliography of nonmarine Ostracoda, 4: Bibliography A. *Sonderveröffentlichungen des Geologischen Institutes der Universität zu Köln*, **38**: 1–186.

Kempf, E.K. 1991. Index and bibliography of nonmarine Ostracoda, 5: Bibliography B. *Sonderveröffentlichungen des Geologischen Institutes der Universität zu Köln*, **77**: 1–238.

Kempf, E.K. [In preparation]. Index and bibliography of nonmarine Ostracoda, 9: Bibliography C. *Sonderveröffentlichungen des Geologischen Institutes der Universität zu Köln.*

Meisch, C. 1987. Liste commentée des ostracodes trouvés au Luxembourg (Crustacea, Ostracoda). *Archives de l'Institut Grand-Ducal de Luxembourg*, section des sciences naturelles, physiques et mathematiques, (N.S.)**40**: 47–51.

Case 2893

Temnorhynchus Hope, 1837 (Insecta, Coleoptera): proposed conservation

Frank-Thorsten Krell

Eberhard-Karls-Universität, Zoologisches Institut, Lehrstuhl für Spezielle Zoologie, Auf der Morgenstelle 28, D-72076 Tübingen, Germany

Abstract. The purpose of this application is to conserve the name *Temnorhynchus* Hope, 1837, a genus of lamellicorn beetles, which is threatened by the unused senior objective synonym *Coptorhinus* Dejean, 1833. Until recently it was believed that *Coptorhinus* Dejean was preoccupied by *Coptorhinus* Guérin Méneville, [1838] but a clarification of the publication dates has shown that Dejean's name is the older.

---

1. Dejean (1833, p. 152) made the genus-group name *Coptorhinus* available by including the species *Scarabaeus retusus* Fabricius, 1781 (p. 14), which is the type species by monotypy. This genus is placed in the SCARABAEIDAE or MELOLONTHIDAE.

2. Hope (1837, p. 47) proposed the replacement name *Temnorhynchus* because he considered Dejean's name preoccupied: 'Sp. 65. *Retusus* — The Baron De Jean has given the generic name of *Coptorhinus* to this species, a name which was published by me some years since in the *Zoological Transactions*, it must therefore be changed; as it is significant of the genus, I substitute for it the term *Temnorhynchus*' (see Krell, 1992, p. 325). On p. 95 Hope wrote 'Mr Kirby in his MSS. gave it the generic name of *Pachypus*, and the Baron de Jean in his Catalogue adopts the term *Coptorhinus*; both names however must be changed, as they are previously used by other writers, for other genera of Lamellicorn beetles'. *Pachypus* Kirby is a nomen nudum. In fact *Coptorhinus* Hope had not been introduced earlier; Hope (1833, p. 62) had published *Coptorhina*, which according to modern nomenclatural rules is not homonymous with *Coptorhinus*.

3. Guérin Méneville ([1838], p. 72) described a 'division' of *Lycus* Fabricius (LYCIDAE) named *Coptorhinus*. The title page of the volume bears the date 1830. However, Guérin's part was published in 1838 as indicated by Sherborn & Woodward (1906, p. 336) and Sherborn (1925, p. 1510); I have confirmed this (Krell, 1992, p. 325 and following). The correct publication date had not been noted in the taxonomic literature until my nomenclatural revision in 1992. Prell (1936, p. 147), Endrödi (1976, p. 232) and Dechambre (1986, p. 32) assumed *Coptorhinus* Dejean to be preoccupied by *Coptorhinus* Guérin Méneville, but Dejean's name is the senior homonym.

4. Guérin Méneville ([1838]) did not include any species in his 'division' *Coptorhinus*, either in the original description or later (L. Bocák in litt., 1993). The name was rarely used and was considered by Kleine (1933, p. 28) as a probable synonym of *Idiopteron* Bourgeois, 1905. With no explanation Kleine (1933) chose to use the latter name over the senior synonym.

5. In a complete bibliography of the genus, I (Krell, 1994) list 194 references (e.g. Ferreira, 1966; Endrődi, 1985; Dechambre 1986; Baraud, 1992 and Cassis & Weir, 1992) in which the name *Temnorhynchus* Hope, 1837, is used as valid, sometimes incorrectly spelled (mostly *Temnorrhynchus*, rarely *Themnorhynchus*, *Themnorrhynchus*, *Temnorynchus*, *Temnorchynchus*, *Temnorhyncus*); some of these are certainly printer's errors. In contrast *Coptorhinus* Dejean, 1833 has not been used since Sturm (1843, p. 115) and Rühl (1889).

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the generic name *Coptorhinus* Dejean, 1833 for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Generic Names in Zoology the name *Temnorhynchus* Hope, 1837 (gender: masculine), type species by monotypy of the replaced nominal genus *Coptorhinus* Dejean, 1833, *Scarabaeus retusus* Fabricius, 1781;

(3) to place on the Official List of Specific Names in Zoology the name *retusus* Fabricius, 1781, as published in the binomen *Scarabaeus retusus* (specific name of the type species of *Temnorhynchus* Hope, 1837);

(4) to place the following names on the Official List of Rejected and Invalid Generic Names in Zoology:

(a) *Coptorhinus* Dejean, 1833, as suppressed in (1) above;

(b) *Coptorhinus* Guérin Méneville, [1838] (a junior homonym of *Coptorhinus* Dejean, 1833).

Acknowledgements

I would like to thank Mr. L. Bocák, Olomuc, for his kindness in informing me about the usage of *Coptorhinus* Guérin Méneville.

References

Baraud, J. 1992. Coléoptères Scarabaeoidea d'Europe. *Faune de France, France et régions limitrophes*, **78**: 1–858.

Cassis, G. & Weir, T.A. 1992. Dynastinae. Pp. 383–425 *in* Houston, W.W.K. (Ed.), *Zoological catalogue of Australia*, vol. 9 (Coleoptera: Scarabaeoidea). AGPS Press, Canberra.

Dechambre, R.P. 1986. Insectes coléoptères Dynastidae. *Faune de Madagascar*, **65**: 1–215.

Dejean, P.F.M.A. 1833. *Catalogue des coléoptères de la collection de M. le Comte Dejean*. Ed. 2, part 2. Pp. 97–176. Méquignon-Marvis, Paris.

Endrődi, S. 1976. Monographie der Dynastinae (Col. Lamellicornis, Melolonthidae) 4. Tribus: Pentodontini der äthiopischen Region, 3. *Entomologische Arbeiten aus dem Museum G. Frey, München*, **27**: 118–282.

Endrődi, S. 1985. *The Dynastinae of the world*. 800 pp., 46 pls. Akadémiai Kiadó, Budapest.

Fabricius, I.C. 1781. *Species insectorum exhibentes eorum differentias specificas synonyma auctorum ...*, vol. 1. 522 pp. Bohnii, Hamburgi & Kilonii.

Ferreira, M.C. 1966. Contribuição para o estudo dos Dinastíneos africanos, V. Os Dinastíneos da região etiópica. *Revista de Entomologia de Moçambique*, **8**: 3–348.

Guérin Méneville, F.C. [1838]. Crustacés, arachnides et insectes. Pp. i–xii, 1–319 *in* Duperrey, L.I. (Ed.), *Voyage autour du monde ... sur la Corvette de Sa Majesté*, La Coquille, *pendant les années 1822, 1823, 1824 et 1825* ... Zoologie, vol. 2, part 2. Bertrand, Paris.

Hope, F.W. 1833. On the characters of several new genera and species of coleopterous insects. *Proceedings of the Zoological Society of London*, **1**: 61–64.

Hope, F.W. 1837. *The coleopterist's manual, containing the lamellicorn insects of Linneus and Fabricius*. 125 pp., 3 pls. Bohn, London.

Kleine, R. 1933. Lycidae. *In*: *Coleopterum Catalogus*. Junk, W. (Ed.), part 128. 145 pp. Junk, Berlin.

Krell, F.T. 1992. Verschmelzung von Antennomeren (Symphysocerie) als Regelfall bei *Temnorhynchus* repandus Burmeister, 1847 ... *Deutsche Entomologische Zeitschrift*, (Neue Folge)**39**: 295–367.

Krell, F.-T. 1994. Phylogenetisch-systematische Revision des Genus *Temnorhynchus* Hope, 1837 ..., part 2. *Beiträge zur Entomologie*, **44**: 83–155.

Prell, H. 1936. Beiträge zur Kenntnis der Dynastinen. Über die Homonymieverhältnisse der Namen von Gattungen und Untergattungen. *Entomologische Blätter*, **32**: 145–152.

Rühl, F. 1889. Beiträge zur Charakteristik der Lamellicornien (Fortsetzung.). *Societas Entomologica*, **4**: 98.

Sherborn, C.D. 1925. *Index Animalium* ..., Sectio secunda, part 7. Index Concolor-Czizeki. Pp. 1453–1771. British Museum, London.

Sherborn, C.D. & Woodward, B.B. 1906. Notes on the dates of publication of the natural history portions of some French voyages ... *Annals and Magazine of Natural History*, (7)**17**: 335–336.

Sturm, J. 1843. *Catalog der Kaefer-Sammlung*. xii, 386 pp, 6 pls. Nürnberg.

Case 2865

BRACHYPTERINAE Erichson, 1845 (Insecta, Coleoptera) and BRACHYPTERINAE Zwick, 1973 (Insecta, Plecoptera): proposed removal of homonymy

P.A. Audisio & R. Fochetti

Dipartimento di Biologia Animale e dell'Uomo (Zoologia), Università degli Studi di Roma 'La Sapienza', Viale dell'Università 32, I-00185 Rome, Italy

P. Zwick

Limnologische Flussstation Schlitz des Max-Planck-Instituts für Limnologie, Postfach 260, D-6407 Schlitz, Germany

Abstract. The purpose of this application is to remove the homonymy between two family-group names in Coleoptera and Plecoptera. It is proposed that the complete name of the stone-fly genus *Brachyptera* Newport, 1848 be adopted as the stem, giving the corresponding family-group name BRACHYPTERAINAE Zwick, 1973. The beetle name BRACHYPTERINAE Erichson, 1845 would remain unchanged.

---

1. The BRACHYPTERINAE were established as a subfamily of NITIDULIDAE (Coleoptera) by Erichson (1845, p. 125), based on the type genus *Brachypterus* Kugelann, 1794 (p. 560), the type species of which is *Dermestes urticae* Fabricius, 1792 (p. 235) by subsequent designation by Parsons (1943, p. 141). The stem BRACHYPTER- has been widely used in the nitidulids to form family, subfamily and tribe names.

2. Ganglbauer (1899, p. 518) introduced for the same taxonomic group the tribe name CATERETINI, emending the ending of Erichson's (1843, p. 227) name 'CATERETES', based on the genus *Kateretes* Herbst, 1793 (p. 11; often erroneously cited as *Cateretes* by many authors). Grouvelle (1913, p. 9) introduced the subfamily name CATERETINAE, which was emended by Nunberg (1976, p. 13) to KATERETINAE. However, Audisio (1984, p. 5; 1993, p. 781) and Kirejtshuk (1986, p. 25) have recently pointed out that the KATERETIDAE should be regarded as a family separate from, although closely related to, the NITIDULIDAE and that *Brachypterus* Kugelann, 1794 belongs to the former family. The name BRACHYPTERINAE now applies to a subfamily within the KATERETIDAE. A world-wide revision of this family is now in preparation by P. Audisio and J. Jelinek.

3. One of the authors of this paper (Zwick, 1973, p. 308) proposed the subfamily name BRACHYPTERINAE in the TAENIOPTERYGIDAE (Plecoptera), based on the genus *Brachyptera* Newport, 1848 (p. 388), the type species of which is *Nemoura trifasciata* Pictet, 1832 (p. 379, pl. 15, figs. 4–10) by subsequent designation by Frison (1929, p. 373). Frison (1929) incorrectly stated that the designation of the type species was by Klapálek (1902) and, under Article 69a(iv) of the Code, Frison (1929) himself becomes the author of the designation. The existence of the homonymous family-group name BRACHYPTERINAE Erichson, 1845 in the Coleoptera was overlooked.

4. In accordance with Article 55b of the Code this case of homonymy is referred to the Commission. In our opinion neither *Brachyptera* Newport, 1848 nor BRACHYPTERINAE Zwick, 1973 have any synonyms which could be used to form a name to replace the junior homonym. We propose that the full name of *Brachyptera* be used as the stem so that the subfamily name based on it would become BRACHYPTERAINAE.

5. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to rule that for the purpose of Article 29 of the Code the stem of the generic name *Brachyptera* Newport, 1848 is BRACHYPTERA-;

(2) to place the following names on the Official List of Generic Names in Zoology:
   (a) *Brachypterus* Kugelann, 1794 (gender: masculine), type species by subsequent designation by Parsons (1943) *Dermestes urticae* Fabricius, 1792;
   (b) *Brachyptera* Newport, 1848 (gender: feminine), type species by subsequent designation by Frison (1929) *Nemoura trifasciata* Pictet, 1832;

(3) to place the following names on the Official List of Specific Names in Zoology:
   (a) *urticae* Fabricius, 1792, as published in the binomen *Dermestes urticae* (specific name of the type species of *Brachypterus* Kugelann, 1794);
   (b) *trifasciata* Pictet, 1832, as published in the binomen *Nemoura trifasciata* (specific name of the type species of *Brachyptera* Newport, 1848);

(4) to place the following names on the Official List of Family-Group Names in Zoology:
   (a) BRACHYPTERINAE Erichson, 1845, type genus *Brachypterus* Kugelann, 1794 (Insecta, Coleoptera);
   (b) BRACHYPTERAINAE Zwick, 1973, type genus *Brachyptera* Newport, 1848 (spelling emended by the ruling in (1) above) (Insecta, Plecoptera);

(5) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name BRACHYPTERINAE Zwick, 1973 (spelling emended to BRACHYPTERAINAE in (1) above).

References

Audisio, P. 1984. Necessità di ridefinizione delle sottofamiglie nei Nitidulidae e nuove prospettive per la ricostruzione filogenetica del gruppo (Coleoptera). *Bollettino di Zoologia*, **51**(Supplementum): 5.

Audisio, P. 1993. Coleoptera Nitidulidae, Kateretidae. *Fauna d'Italia*, **32**: 1–971.

Erichson, W.F. 1843. Versuch einer systematischen Eintheilung der Nitidularien. *Zeitschrift für Entomologie* (Germar), **4**: 225–361.

Erichson, W.F. 1845. *Naturgeschichte der Insecten Deutschlands, Abt. 1 (Coleoptera)*, vol. 3. vii, 1–800 pp. Nicolai, Berlin.

Fabricius, J.C. 1792. *Entomologia Systematica*, vol. 1, part 1. 330 pp. Proft, Hafniae.

Frison, T.H. 1929. Fall and winter stoneflies, or Plecoptera, of Illinois. *Bulletin of the Illinois State Natural History Survey*, **18**: 345–409.

Ganglbauer, L. 1899. *Die Käfer von Mitteleuropa*, vol. 3. 1046 pp. Gerold's Sohn, Wien.

Grouvelle, A. 1913. Byturidae, Nitidulidae. Pp. 1–223 *in* Junk, W. & Schenkling, S. (Eds.), *Coleopterorum Catalogus*, vol. 56. Junk, Berlin.

Herbst, J.F.W. 1793. *Natursystem allen bekannten in- und ausländischen Insecten; nach dem System des Ritter Carl von Linné bearbeitet (von C.G. Jablonsky), fortgesetzt von J.F.W. Herbst*. 392 pp. Pauli, Berlin.

Kirejtshuk, A.G. 1986. Analysis of the structure of genitalia for reconstructing phylogenesis and argumentation to a system of the fam. Nitidulidae (Coleoptera). *Trudy Vsesoyuznogo Entomologicheskogo Obshchestva*, **68**: 22–28. [In Russian].

Klapálek, F. 1902. Zur Kenntnis der Neuropteroiden von Ungarn, Bosnien und Herzegovina. *Természetrajzi Füzetek*, **25**: 161–180.

Kugelann, J.G. 1794. Verzeichniss der in einigen Gegenden Preussens bis jetzt entdeckten Käferarten nebst kurtzen Nachrichten von denselben. *Neuestes Magazin für Liebhaber der Entomologie*, **1**(5): 513–582.

Newport, E. 1848. Postscript to Mr. Newport's paper on *Pteronarcys regalis*. *Proceedings of the Linnean Society, London*, **1**: 387–389.

Nunberg, M. 1976. Klukze do oznaczania owadòw Polski, XIX (65): Coleoptera — Nitidulidae. *Polskie Towarzystwo Entomologiczne*, Warszawa, **92**: 1–92.

Parsons, C.T. 1943. A revision of the Nearctic NITIDULIDAE (Coleoptera). *Bulletin of the Museum of Comparative Zoology, Harvard College*, **92**: 121–278.

Pictet, F.J. 1832. Mémoire sur les larves de némoures. *Annales des Sciences Naturelles*, **26**: 369–393.

Zwick, P. 1973. Insecta: Plecoptera. Phylogenetisches System und Katalog. *Das Tierreich*, **94**: 1–465.

Case 2907

Sphaerocera Latreille, 1804 and *Borophaga* Enderlein, 1924 (Insecta, Diptera): proposed conservation; *Sphaerocera curvipes* Latreille, 1805 and *Phora flavimana* Meigen, 1830: proposed conservation of the specific names

Brian V. Brown

Entomology Section, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, California 90007, U.S.A.

Curtis W. Sabrosky

Systematic Entomology Laboratory, U.S. Department of Agriculture, c/o Smithsonian Institution, Washington, D.C. 20560, U.S.A.

Abstract. The purpose of this application is to conserve the name *Sphaerocera* Latreille, 1804 and that of its type species *Sphaerocera curvipes* Latreille, 1805 (family SPHAEROCERIDAE Macquart, 1835), together with the name *Borophaga* Enderlein, 1924 and that of its type species *Phora flavimana* Meigen, 1830 (family PHORIDAE Curtis, 1833). The name *Sphaerocera* has for many years been accepted as valid for a group of acalyptrate flies. A specimen of *Musca subsultans* Linnaeus, 1767 (the type species of *Borborus* Meigen, 1803) which has been treated as the holotype of *M. subsultans* has been identified as an example of *P. flavimana*. Recognition of the identity of this specimen would render the name *Borophaga*, which is in use for a phorid genus, a junior subjective synonym of *Borborus*, a name which was long used in the sense of *Sphaerocera*. Suppression of *Borborus* and the specific name of *M. subsultans* is proposed.

---

1. Meigen (1800, p. 31) proposed the name *Cypsela* for a group of flies with an expanded first hind tarsomere, the type of which was designated as *Musca subsultans* Linnaeus, 1767 (p. 993) by Coquillett (1910, p. 530). Meigen's (1800) work, in which the name appeared, was suppressed by the Commission in Opinion 678 (October 1963).

2. Meigen (1803, p. 276) proposed the name *Borborus* for the same group of flies. The type of *Borborus* was designated by Curtis (1833, p. 469) as *Musca subsultans*. Duda (1938, p. 14) proposed the designation of *Borborus ater* Meigen, 1830 (p. 203) as a new type species for *Borborus* because the identity of the type specimen of *subsultans* was uncertain. This has led some authors to cite incorrectly *B. ater* as the type species of *Borborus*.

3. The name *Borborus* was long used for a genus of acalyptrate flies (family BORBORIDAE Newman, 1834, as Borborites), characterized by an expanded first hind tarsomere. This use continued until Richards (1930, p. 263), who considered that the valid name for the genus *Borborus* was *Sphaerocera* Latreille, 1804 (p. 197). Richards believed that workers should 'date all genera from the time species were first

included'. Meigen did not include any species in *Borborus* until 1830 and Richards therefore believed that *Borborus* was a junior synonym of *Sphaerocera*. The type species of *Sphaerocera* is *Sphaerocera curvipes* Latreille, 1805 (p. 394) by subsequent monotypy.

4. Haliday (1851, p. 144) suggested that the supposed type specimen of *M. subsultans*, in the Linnean Society collections in London, belonged in the family PHORIDAE Curtis, 1833. This was confirmed by Richards (1930, p. 263), who suggested that the original type specimen was probably lost, that a new specimen had been erroneously labelled as *M. subsultans*, and that this specimen belonged to the species *Phora flavimana* Meigen, 1830 (p. 213). Despite this, Richards retained the accepted meaning of the name *subsultans* Linnaeus, 1767 as 'it is improbable that all the early authors should have made so serious a misidentification. I therefore retain the name *Sphaerocera subsultans* Linné ... [for this] very well known fly'. Richards also noted that *Sphaerocera curvipes* Latreille, 1805 had been synonymized with *Musca subsultans* Fabricius, 1775 but that 'the name *Musca subsultans* dates back to Linné (1767). Fabricius (*loc. cit.*) merely copies Linné's diagnosis with a few omissions'. Despite Richards's use of the name *M. subsultans* subsequent authors (e.g. Duda, 1938) have favored *S. curvipes* as the name for the species because of the uncertainty about the typification of *subsultans*.

5. Disney (1982, p. 115) also examined the Linnean Society specimen and confirmed that it was indeed a phorid. He placed *subsultans* (as defined by this specimen) in the genus *Borophaga* Enderlein, 1924 (p. 277), departing from the long accepted interpretation of *subsultans*, despite the fact that the species is the type of *Borborus* Meigen, 1803. His placement of *subsultans* in the PHORIDAE rendered *Borophaga* Enderlein, 1924 (type species *Phora flavimana* Meigen, 1830 by original designation) a junior synonym of *Borborus* Meigen, 1803. The name *Borophaga* is widely used in the recent literature (e.g. Borgmeier, 1963; Disney, 1983; Brown, 1992; a further list of seven representative works is held by the Commission Secretariat).

6. Since Richards (1930), the name *Sphaerocera* Latreille, 1804 has become widely used in the literature in place of the *Borborus* of earlier authors (e.g. Kim, 1968; Marshall & Richards, 1987; Pitkin, 1988; a further list of seven representative works is held by the Commission Secretariat). The genus is the type of the family group SPHAEROCERIDAE. Since *Borborus* has become disused and the meaning of its type species *Musca subsultans* has been uncertain the best course of action would be to suppress both *Borborus* Meigen, 1803 and *subsultans* Linnaeus, 1767 thereby maintaining stability of usage of names in the SPHAEROCERIDAE and the PHORIDAE, i.e. *Sphaerocera*, *Borophaga* and *Phora flavimana*. Following this, there would be no further need for a debate over the typification of *subsultans*. Suppression of *Borborus* would also render invalid the family name BORBORIDAE Newman, 1834 and would conserve the widely used name SPHAEROCERIDAE Macquart, 1835.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the following names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
   (a) the generic name *Borborus* Meigen, 1803;
   (b) the specific name *subsultans* Linnaeus, 1767, as published in the binomen *Musca subsultans*;

(2) to place on the Official List of Generic Names in Zoology the following names:
(a) *Sphaerocera* Latreille, 1804 (gender: feminine), type species by subsequent monotypy *Sphaerocera curvipes* Latreille, 1805;
(b) *Borophaga* Enderlein, 1924 (gender: feminine), type species by original designation *Phora flavimana* Meigen, 1830;

(3) to place on the Official List of Specific Names in Zoology the following names:
(a) *curvipes* Latreille, 1805, as published in the binomen *Sphaerocera curvipes* (specific name of the type species of *Sphaerocera* Latreille, 1804);
(b) *flavimana* Meigen, 1830, as published in the binomen *Phora flavimana* (specific name of the type species of *Borophaga* Enderlein, 1924);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Borborus* Meigen, 1803, as suppressed in (1)(a) above;

(5) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *subsultans* Linnaeus, 1767, as published in the binomen *Musca subsultans* and as suppressed in (1)(b) above.

Acknowledgements
We would like to thank N. Erridge and S. Marshall for their help with preparing this manuscript.

References

Borgmeier, T. 1963. Revision of the North American phorid flies. Part 1. The Phoridae, Aenigmatiinae and Metopininae, except *Megaselia*. *Studia Entomologica*, **6**: 1–256.

Brown, B.V. 1992. Generic revision of Phoridae of the Nearctic Region and phylogenetic classification of Phoridae, Sciadoceridae and Ironomyiidae (Diptera: Phoridea). *Memoirs of the Entomological Society of Canada*, **164**: 1–144.

Coquillett, D.W. 1910. The type species of the North American genera of Diptera. *Proceedings of the United States National Museum*, **37**: 449–647.

Curtis, J. 1833. *British entomology: being illustrations and descriptions of the genera of insects found in Great Britain and Ireland*, vol. 10. Pp. 434–481. Ellis, London.

Disney, R.H.L. 1982. Confirmation of a suspected synonym in the genus *Borophaga* (Diptera: Phoridae). *Entomologist's Monthly Magazine*, **118**: 115.

Disney, R.H.L. 1983. Scuttle flies — Diptera, Phoridae (except *Megaselia*). *Handbooks for the Identification of British Insects*, **10**: 1–81.

Duda, O. 1938. Sphaeroceridae (Cypselidae). Pp. 1–182 *in* Linder, E. (Ed.), *Die Fliegen der Palaearktischen Region*, vol. 6, part 1. Schweizerbart, Stuttgart.

Enderlein, G. 1924. Zur Klassifikation der Phoriden und über vernichtende Kritik. *Entomologische Mitteilungen*, **8**: 270–281.

Fabricius, J.C. 1775. *Systema entomologiae, sistens insectorum classes, ordines, genera, species* .... 832 pp. Flensburgi & Lipsiae.

Haliday, A.H. 1851. Sendschreiben von Alexis H. Haliday an C.A. Dohrn über die Dipteren aus der in London befindlichen Linneischen Sammlung. *Stettiner Entomologische Zeitung*, **12**: 131–145.

Kim, K.C. 1968. Revision of *Sphaerocera*, with description of a new genus *Afromyia*. *Annals of the Entomological Society of America*, **61**: 296–312.

Latreille, P.A. 1804. Tableau méthodique des insectes. Pp. 129-200 *in*: *Nouveau dictionnaire d'histoire naturelle*, vol. 24. Société de Naturalistes et d'Agriculteurs, Paris.

Latreille, P.A. 1805. *Histoire naturelle, générale et particulière des crustacés et des insectes*, vol. 14. 432 pp. Paris.

Linnaeus, C. 1767. *Systema Naturae*, Ed. 12, vol. 1, part 2. Pp. 533–1327. Laurentii Salvii, Holmiae.

Macquart, P.J.M. 1835. *Histoire naturelle des insectes.* Part 2 (Diptères). 573 pp. Paris.

Marshall, S.A. & Richards, O.W. 1987. Sphaeroceridae. Pp. 993–1006 *in* McAlpine, J.F. (Ed.), Manual of Nearctic Diptera, vol. 2. *Agriculture Canada Monograph*, **28**: 1–1332.

Meigen, J.W. 1800. *Nouvelle classification des mouches à deux ailes (Diptera L.) d'après un plan tout nouveau.* 40 pp. Paris.

Meigen, J.W. 1803. Versuch einer neuen Gattungs Eintheilung der Europäischen Zweiflügeligen Insekten. *Magazin für Insektenkunde (Illiger)*, **2**: 259–281.

Meigen, J.W. 1830. *Systematische Beschreibung der bekannten Europäischen Zweiflügeligen*, vol. 6. 401 pp. Aachen & Hamm, Germany.

Newman, E. 1834. Attempted division of British insects into natural orders. *The Entomological Magazine*, **2**: 379–431.

Pitkin, B.R. 1988. Lesser dung flies (Diptera: Sphaeroceridae). *Handbooks for the Identification of British Insects*, **10**(5): 1–33.

Richards, O.W. 1930. The British species of Sphaeroceridae (Borboridae, Diptera). *Proceedings of the General Meeting of the Zoological Society of London*, **1930**: 261–345.

Case 2917

Coproica Rondani, 1861 and *Ischiolepta* Lioy, 1864 (Insecta, Diptera): proposed conservation of usage by the designation of *Limosina acutangula* Zetterstedt, 1847 as the type species of *Coproica*

Terry A. Wheeler

Department of Environmental Biology, University of Guelph, Guelph, Ontario, Canada N1G 2W1

John E. Swann

Department of Entomology, The Royal Ontario Museum, 100 Queen's Park, Toronto, Ontario, Canada M5S 2C6

Abstract. The purpose of this application is to designate *Limosina acutangula* Zetterstedt, 1847 as the type species of the sphaerocerid fly genus *Coproica* Rondani, 1861 in accordance with the original concept, accepted understanding and usage. The original fixation of *Ischiolepta pusilla* (Fallén, 1820) as the type was based on a misidentification. The usage of *Ischiolepta* Lioy, 1864 will also be conserved.

---

1. Fallén (1820, p. 8) proposed the name *Copromyza pusilla* for specimens of a sphaerocerid fly currently known as *Ischiolepta pusilla*, a widespread, frequently synanthropic species assigned to the subfamily SPHAEROCERINAE. Han & Kim (1990, p. 433) recently designated a lectotype for *C. pusilla*, fixing its identity as the species recognized by modern workers as *Ischiolepta pusilla* (Fallén, 1820).

2. Meigen (1830, p. 206) described and illustrated a species that he identified as *Borborus pusillus* (Fallén). However, Meigen's description and illustration clearly indicate that the species before him was not *Copromyza pusilla* Fallén, 1820. The only sphaerocerid fly whose wing venation corresponds to that described by Meigen and illustrated in his plate 62, fig. 19, is the male of the species currently recognized as *Coproica acutangula* (Zetterstedt, 1847) (subfamily LIMOSININAE).

3. Macquart (1835, p. 570) erected the genus *Heteroptera* to accommodate the single species *Heteroptera pusilla*, making *Copromyza pusilla* Fallén, 1820 the type species by monotypy. This was a misidentification: in Macquart's discussion of the species he referred to the modified wing venation that distinguishes *Copromyza pusilla* from other sphaerocerid flies, and, as with Meigen (1830), it is obvious from Macquart's description that the species before him was *Limosina acutangula* Zetterstedt, 1847, and not *Copromyza pusilla* Fallén, 1820.

4. Zetterstedt (1847, p. 2490) correctly identified and redescribed *Copromyza pusilla* noting the distinctive crenulate scutellum of the species. Zetterstedt stated on p. 2491 that *Borborus pusillus* of Meigen and *Heteroptera pusilla* of Macquart are not the same species as *Copromyza pusilla* Fallén, 1820, and that the species that Meigen and Macquart had before them is the one that he described as the new species *Limosina acutangula* Zetterstedt, 1847 (p. 2499). Most modern workers on the

SPHAEROCERIDAE consider *L. acutangula* to represent *Coproica* Rondani, 1861, a cosmopolitan, frequently synanthropic genus of limosinine sphaerocerids.

5. Rondani (1856, p. 124) included *Heteroptera* Macquart, 1835 in a key and catalogue of sphaerocerid genera, with *Copromyza pusilla* Fallén, 1820 listed as type species. Papp (1984, p. 81) considered Rondani's citation of *Copromyza pusilla* as 'Spec. Typ.' of *Heteroptera* to be a subsequent designation of the type species. Papp's interpretation was erroneous because *Copromyza pusilla* was already the type species of *Heteroptera* by monotypy (see para. 3 above).

6. Rondani (1861, p. 10) proposed *Coproica* as a replacement name for *Heteroptera* Macquart, 1835 which was preoccupied by *Heteroptera* Latreille, 1817 (Insecta, Hemiptera). In fact, both *Heteroptera* Macquart, 1835 and *Heteroptera* Latreille, 1817 are preoccupied by *Heteroptera* Rafinesque, 1814 (Mollusca).

7. Authors of recent catalogues of SPHAEROCERIDAE have cited the type species of *Coproica* Rondani, 1861 as *Limosina pusilla* (Meigen, 1830) (Richards, 1965, p. 725; Richards, 1967, p. 16; Hackman, 1977, p. 400), *Borborus pusillus* Meigen, 1830 sensu Macquart (1835) (Richards, 1980, p. 618), *Copromyza pusilla* Fallén, 1820 (Papp, 1984, p. 81), or *Borborus pusillus* Meigen, 1830 (Marshall, 1989, p. 603). All the above authors recognized *Copromyza pusilla* Fallén, 1820 sensu Meigen (1830) and Macquart (1835) as a misidentification of *Limosina acutangula* Zetterstedt, 1847.

8. There is no evidence that Macquart's (1835) designation of *Copromyza pusilla* Fallén, 1820 as the type species of *Heteroptera* represents a deliberate use of misidentification (Article 11(i) of the Code). If Macquart had specified that the type of *Heteroptera* was *pusilla* in the sense of Meigen (1830) and not of Fallén (1820) then *Heteroptera pusilla* would be a valid name and would be attributed to Macquart (1835). However, Macquart referred only to *Copromyza pusilla* Fallén, 1820 and did not specify that he used *pusilla* in the sense of Meigen (1830). Furthermore, Macquart listed *Borborus pusillus* of Meigen (1830) as a synonym of *Copromyza pusilla* Fallén, 1820, which indicates that he considered the two conspecific. It is clear that Macquart (1835) misidentified the type species of the genus and the case must be referred to the Commission (Article 70b) to designate a type species for *Heteroptera* Macquart, 1835, i.e. *Coproica* Rondani, 1861.

9. Designation of *Copromyza pusilla* Fallén, 1820, the species named in the original fixation, as the type species of *Coproica* Rondani, 1861 would render *Ischiolepta* Lioy, 1864 (p. 1112, type species by monotypy *Borborus denticulatus* Meigen, 1830 (p. 200)) a junior subjective synonym of *Coproica* and would change the currently accepted concept of both generic names, thereby confusing the taxonomy of the family SPHAEROCERIDAE. Designation of the species actually involved, in accordance with Article 70b(i), would fix *Limosina acutangula* Zetterstedt, 1847 as the type species of *Coproica* Rondani, 1861. This would be in accordance with common usage and would also conserve *Ischiolepta* Lioy, 1864 as currently recognized. *Limosina acutangula* would be automatically (Article 67(h)) the type species of the invalidly named nominal genus *Heteroptera* Macquart, 1835.

10. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type species for the nominal genus *Coproica* Rondani, 1861 and to designate *Limosina acutangula* Zetterstedt, 1847 as the type species;

(2) to place the following names on the Official List of Generic Names in Zoology:
   (a) *Coproica* Rondani, 1861 (gender: feminine), type species by designation in (1) above *Limosina acutangula* Zetterstedt, 1847;
   (b) *Ischiolepta* Lioy, 1864 (gender: feminine), type species by monotypy *Borborus denticulatus* Meigen, 1830;

(3) to place the following names on the Official List of Specific Names in Zoology:
   (a) *acutangula* Zetterstedt, 1847, as published in the binomen *Limosina acutangula* (specific name of the type species of *Coproica* Rondani, 1861);
   (b) *denticulatus* Meigen, 1830, as published in the binomen *Borborus denticulatus* (specific name of the type species of *Ischiolepta* Lioy, 1864);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Heteroptera* Macquart, 1835 (a senior objective synonym of *Coproica* Rondani, 1861 and a junior homonym of *Heteroptera* Rafinesque, 1814).

Acknowledgements

We thank S.A. Marshall and J.R. Vockeroth for their advice and comments concerning this application.

References

Fallén, C.F. 1820. Monographia Heteromyzides Sveciae, 10 pp. *in: Diptera Sveciae*, vol. 2, pt. 16. 337 pp. Berlingianis, Lundae.

Hackman, W. 1977. Family Sphaeroceridae (Borboridae). Pp. 398 406 *in* Delfinado, M.D. & Hardy, D.E. (Eds.), *A catalog of the Diptera of the Oriental region*, Suborder Cyclorrhapha (excluding Division Aschiza), vol. 3. 854 pp. University Press of Hawaii, Honolulu.

Han, H.-Y. & Kim, K.C. 1990. Systematics of *Ischiolepta* Lioy (Diptera: Sphaeroceridae). *Annals of the Entomological Society of America*, **83**: 409–443.

Lioy, P. 1864. I ditteri distributi secondo un nuovo metodo di classificazione naturale. *Atti dell'Istituto Veneto di Scienze, Lettere ed Arti*, (3)**9**(2): 1087–1126.

Macquart, P.J.M. 1835. *Histoire naturelle des insectes.* Diptères, vol. 2. 703 pp. Roret, Paris.

Marshall, S.A. 1989. Family Sphaeroceridae. Pp. 601–607 *in* Evenhuis, N.L. (Ed.), *Catalog of the Diptera of the Australasian and Oceanian regions*. 1155 pp. Bishop Museum Press, Honolulu.

Meigen, J.W. 1830. *Systematische Beschreibung der bekannten europäischen zweiflügeligen Insekten*, vol. 6. 401 pp. Schultz, Hamm.

Papp, L. 1984. Family Sphaeroceridae. Pp. 68–107 *in* Soós, A. & Papp, L. (Eds.), *Catalogue of Palaearctic Diptera*, vol. 10. 402 pp. Akadémiai Kiadó, Budapest.

Richards, O.W. 1965. Family Sphaeroceridae. Pp. 718–726 *in* Stone, A., Sabrosky, C.W., Wirth, W.W., Foote, R.H. & Coulson, J.R. (Eds.), *A catalog of the Diptera of America north of Mexico*. Agricultural Handbook No. 276. 1696 pp. United States Department of Agriculture, Washington.

Richards, O.W. 1967. Family Sphaeroceridae (Borboridae). *A catalogue of the Diptera of the Americas south of the United States*, no. 72. 28 pp. Museo de Zoologica, Universidade de São Paulo.

Richards, O.W. 1980. Family Sphaeroceridae. Pp. 614–626 *in* Crosskey, R.W. (Ed.), *Catalogue of the Diptera of the Afrotropical region*. 1437 pp. British Museum (Natural History), London.

Rondani, C. 1856. *Dipterologiae italicae prodromus. Genera Italica ordinis Dipterorum* ..., vol. 1. 228 pp. Stoschi, Parmae.

Rondani, C. 1861. *Dipterologiae italicae prodromus. Species Italicae ordinis Dipterorum...*, vol. 4. 174 pp. Stocche, Parmae.

Zetterstedt, J.W. 1847. *Diptera Scandinaviae disposita et descripta*, vol. 6. Pp. 2163–2580. Officina Lundbergiana, Lundae.

Case 2934

Bagrus hoevenii Bleeker, 1846 (currently *Hemibagrus hoevenii*; Osteichthyes, Siluriformes): proposed designation of a neotype

Maurice Kottelat
Route de Fregiécourt 96c, Case Postale 57, 2952 Cornol, Switzerland

Kelvin K.P. Lim & Peter K.L. Ng
Department of Zoology, National University of Singapore, Kent Ridge, Singapore 0511, Republic of Singapore

Abstract. The purpose of this application is to propose a neotype for *Hemibagrus hoevenii* (Bleeker, 1846), an economically important catfish from Southeast Asia, the name of which had previously been regarded as a junior subjective synonym of *H. nemurus* (Valenciennes in Cuvier & Valenciennes, 1840) but is now regarded as valid. Designation of a neotype will resolve the uncertain identity of *H. hoevenii* and stabilise the taxonomy of the species.

---

1. Bagrids of the *Hemibagrus nemurus* (Valenciennes in Cuvier & Valenciennes, 1840, p. 423) species-group are economically important catfish in South and Southeast Asia, and their taxonomy has been particularly confused. There are a large number of nominal species for which types are not always readily available or easy to identify.

2. One of these nominal species is *Bagrus hoevenii* Bleeker, 1846, described (p. 154) from Java on the basis of an unspecified number of specimens of unstated size. Bleeker (1862, p. 56) subsequently noted that he had 10 specimens ranging from 126–290 mm in total length from 10 localities in Java, Sumatra and Borneo. Bleeker (1862, pl. 70) also provided a figure of *B. hoevenii* for the first time, although the provenance of the specimen on which it was based was not stated.

3. *Bagrus hoevenii* Bleeker, 1846 was accepted as a valid species until Weber & de Beaufort (1913, p. 341) synonymised it under *B. nemurus* Valenciennes in Cuvier & Valenciennes, 1840.

4. The problem with Bleeker's type material is well known. Specimens (including syntypes) of what he regarded as one species, even if they were from different localities, were often placed in the same bottle without any data or explanation to their origins. Some of this material is in poor condition. There is also a very good chance that the original type material of *B. hoevenii* is lost. Bleeker (1846) described *B. hoevenii* while stationed in Batavia (now Jakarta) but was shortly afterwards transferred to Samarang. Of this transfer, Bleeker (1878, p. 21) wrote that 'it was out of the question to move my collections to my new station, so I had to leave them behind in Batavia'. Boeseman (1973, p. 59) noted that 'When Bleeker returned from the East Indies [in 1860], he still had in his possession all the original specimens on which he had based the descriptions of his new species, excepting a few that had

already been lost in the East Indies during the period of his banishment from Batavia'.

5. In the Nationaal Natuurhistorisch Museum in Leiden there is a series of Bleeker's specimens (NNM 6684) labelled as *Bagrus hoevenii*. We examined eight specimens (97.5–320 mm standard length; 122–400 mm total length), all without any data. These specimens seem to be two species but their twisted condition, damaged fins and spines as well as their faded coloration make most of them difficult to identify. It is noteworthy that while the smallest of these specimens is in agreement with Bleeker's data in his atlas (126 mm total length), the largest are much larger (400 mm against 290 mm). Moreover, the largest specimen is *H. nemurus*. One of the specimens (210 mm standard length) is almost certainly the one figured natural size by Bleeker (1862, pl. 70) but he did not record if this was one of his original Javanese specimens; it may be one of his Sumatran or Bornean specimens. It is not possible to be completely sure if this specimen is conspecific with our specimens from Peninsular Malaysia and Sumatra as several characteristics are no longer discernible. We have been unable to find recent specimens from Java referable to *B. hoevenii*.

6. Whether any of the NNM specimens are the type(s) of *B hoevenii* can never be established for certain. This uncertainty, compounded with the poor condition of the specimens and the fact that Bleeker had specimens of *B. hoevenii* from Java, Sumatra and Borneo, makes it very unwise to select a lectotype from this series.

7. Bleeker also distributed some of his specimens to the British (now Natural History) Museum in London, and Günther (1864, p. 81) lists in his catalogue 'one of the typical specimens' of *Bagrus hoevenii*. As the specimen sent to the Natural History Museum was sent after the publication of vol. 2 of Bleeker's atlas (1862), the above discussion applies to this specimen as well, and there is no way of knowing if it is actually a type. The same applies to any of Bleeker's specimens in other museums (his material was auctioned and distributed to other museums after his death).

8. In an ongoing revision of the Sundaic members of the *Hemibagrus nemurus* species-group, we and our colleagues recognise as valid several species which had previously been placed under the synonymy of *H. nemurus* sensu lato. The identity of *B. hoevenii* Bleeker, 1846 now comes into question as an available name for one of the species we recognise. In particular, specimens of a large bagrid with black-edged caudal fin from Peninsular Malaysia, Borneo and Sumatra closely resemble what Bleeker (1862, pl. 70) had illustrated as *B. hoevenii*. *Hemibagrus hoevenii* (in this sense) seems to be widely distributed in Sundaic Southeast Asia and has been confused under *H. nemurus*, a widely fished species. *H. hoevenii* is distinguished from *H. nemurus* mainly in having a black-edged caudal fin with tapering lobes (vs. caudal fin without black edges and fairly rounded lobes). Papers on various aspects of the taxonomy, phylogeny and ecology of the *Hemibagrus nemurus* species-group are now in preparation. It is thus necessary to firmly fix the identity of *Bagrus hoevenii* Bleeker, 1846 to prevent future confusion.

9. Recommendation 75E of the Code says 'Neotypes should be designated to clarify the application of names when their continued existence as nomina dubia threatens the stability of other names; if, despite the existence of a holotype, or a lectotype or syntypes, it is not possible to resolve a complex zoological problem, a zoologist should refer the case to the Commission which may, by the use of the plenary power, set aside the existing type material and designate a neotype'.

10. In view of this and the need to have this name stabilised, we therefore propose that a neotype for *Bagrus hoevenii* Bleeker, 1846 be chosen to replace the series of Bleeker specimens which may or may not include a holotype or syntypes. The proposed neotype is a specimen 116 mm standard length, 170 mm total length, collected from Kampong Bukit Kebong at Muar River, Johor, Peninsular Malaysia by M. Kottelat & K.K.P. Lim on 25 July 1992. It is deposited in the Zoological Reference Collection of the Department of Zoology, National University of Singapore, under the catalogue number ZRC 37472. Although the specimen is not from Java, it conforms to Bleeker's (1862, p. 56, pl. 70) figure and redescriptions, as well as to the specimen in Leiden on which his figure is probably based.

11. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type specimens for the nominal species *Bagrus hoevenii* Bleeker, 1846 and to designate as the neotype the specimen ZRC 37472 in the Zoological Reference Collection at the Department of Zoology, National University of Singapore described in para. 10 above;

(2) to place on the Official List of Specific Names in Zoology the name *hoevenii* Bleeker, 1846, as published in the binomen *Bagrus hoevenii* and as defined by the neotype designated in (1) above.

References

Bleeker, P. 1846. Overzigt der Siluroieden welke te Batavia voorkomen. *Natuur- en Geneeskundig Archief voor Néêrland's Indië*, **3**(2): 135-184. [Reprinted in 1847 in *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen*, **21**: 1–60].

Bleeker, P. 1862. *Atlas ichthyologique des Indes Orientales Néêrlandaises*, vol. 2. 112 pp., pls. 49–101. Muller, Amsterdam.

Bleeker, P. 1878. Biographical notices concerning P. Bleeker. Pp. 11–42 *in* Lamme, W.H. (Ed.), 1973, *Collected fish papers of Pieter Bleeker*, vol. 1. 135 pp. Junk, The Hague.

Boeseman, M. 1973. Some informative remarks in the auction of Bleeker's collection. Pp. 56–61 *in* Lamme, W.H. (Ed.), *Collected fish papers of Pieter Bleeker*, vol. 1. 135 pp. Junk, The Hague.

Günther, A. 1864. *Catalogue of fishes in the British Museum*, vol. 5. xxii, 455 pp. British Museum, London.

Valenciennes, A. 1840. *In* Cuvier, G. & Valenciennes, A., *Histoire naturelle des poissons*, vol. 14. 464 pp., pls. 389–420. Pitois-Levrault, Paris.

Weber, X. & de Beaufort, L.F. 1913. *The fishes of the Indo-Australian Archipelago*, vol. 2 (Malacopterygii, Myctophoidea, Ostariophysi: Siluroidea). xx, 404 pp. Brill, Leiden.

Case 2898

Scomber dentex Bloch & Schneider, 1801 (currently *Caranx* or *Pseudocaranx dentex*) and *Caranx lugubris* Poey, [1860] (Osteichthyes, Perciformes): proposed conservation of the specific names

William F. Smith-Vaniz

U.S. Department of the Interior, National Biological Survey, Southeastern Biological Science Center, 7920 N.W. 71st Street, Gainesville, Florida 32653, U.S.A.

John E. Randall

Bernice P. Bishop Museum, Box 19000-A, Honolulu, Hawaii 96817, U.S.A.

Abstract. The purpose of this application is to conserve the specific names of the white trevally *Scomber* (now *Caranx* or *Pseudocaranx*) *dentex* Bloch & Schneider, 1801 and the black jack *Caranx lugubris* Poey, [1860] (family CARANGIDAE). *Scomber glaucus* Linnaeus, 1758 is a composite species which is an unused senior synonym of both *S. dentex* (the type species of *Pseudocaranx* Bleeker, 1863) and *Gasterosteus* (now *Trachinotus*) *ovatus* Linnaeus, 1758; suppression of *glaucus* is proposed. It is also proposed that the widely used name *Caranx lugubris* be conserved by the suppression of the senior synonym *C. ascensionis* Cuvier in Cuvier & Valenciennes, 1833. '*Scomber adscensionis* Osbeck, 1771' is formally unavailable but has been used for the species now referred to as *C. dentex* and, in error, to that referred to as *C. lugubris*; it is proposed that the name '*adscensionis*' also be placed on the Official Index. *C. ascensionis* Cuvier is currently almost universally regarded as an invalid junior secondary homonym of '*C. adscensionis* (Osbeck)'. *Caranx* (or *Pseudocaranx*) *dentex* is a widely distributed species from the subtropics and edges of the tropics in the Atlantic and Indo-Pacific; *C. lugubris* is a circumglobal tropical species. Both *dentex* and *lugubris* are commercially valuable food species.

---

1. In 1758 Linnaeus (p. 298) described the nominal species *Scomber glaucus* and referred to the descriptions of two previous authors. The sources were *Scomber adscensionis* Osbeck, 1757 (p. 296) and a description by Artedi (1738) in the third (p. 32) and fourth parts (pp. 51–52) of his *Ichthyologia*. Translations of Osbeck's Swedish work appeared in 1765 (a German version by J.G. Georgi) and 1771 (an English version by J.R. Forster which was a translation from the German). Linnaeus's name *glaucus* was used in both the (1765) and (1771) translations but '*adscensionis* Osbeck' appeared (p. 94) as a synonym in a footnote in the latter, and has been adopted by many subsequent authors as '*Caranx adscensionis* (Osbeck, 1771)'. However, Osbeck's name is pre-Linnaean and is therefore not available from either 1757 or 1771 (Articles 11a and 11e(i) of the Code). Wheeler (1963, p. 533) noted that Osbeck's description left little doubt that '*Scomber adscensionis*' was a

species of *Caranx* for which the type locality was the island of Ascension in the mid-south Atlantic. In relation to Artedi's account, Wheeler noted that this referred to a species of *Trachinotus* and wrote 'it is highly probable that it refers to the *Trachinotus glaucus* of authors' (now known as *T. ovatus* (Linnaeus, 1758) or *T. goodei* Jordan & Evermann, 1896; see para. 6 below). Wheeler (1963, p. 534) further noted that Linnaeus himself (1764, p. 89) considered the name *Scomber glaucus* to apply to a carangid fish with the posterior lateral line armoured with scutes.

2. A second carangid fish with scutes was described from Ascension Island by Cuvier in Cuvier and Valenciennes, 1833 as *Caranx ascensionis* (p. 102, fig. 249), based on a specimen collected by Quoy and Gaimard, a description of *Scomber glaucus* Linnaeus in Bloch & Schneider (1801, p. 33) (see para. 5), and on a copy made by Sarah Bowdich of G. Forster's unpublished drawing labeled '*Scomber ascensionis*'. Perhaps for this reason Cuvier attributed the name to Forster but the description is Cuvier's and the nominal species should be attributed to him. Cuvier noted that his taxon was distinct from the *adscensionis* described by Osbeck (1757). Streets (1877, p. 88) listed *Caranx ascensionis* Cuvier in his synonymy under the heading '*Carangus ascensionis* (Forst.),' while Günther (1880, pp. 4, 5) and Seale (1901, p. 73) used the citation '*Caranx ascensionis* (Forst.)'.

3. Osbeck's (1757) description of *Scomber adscensionis* was not very detailed and no type material is known. The high number of dorsal and anal fin rays (in translation, 1771: 'the first dorsal-fin has seven, the second twenty-five ... the anal-fin twenty-five, rays') would eliminate *Caranx ascensionis* Cuvier as a likely candidate for its identity. One of us (W.F. S.-V.) has examined numerous specimens of Cuvier's species; these have 20–22 dorsal and 16–19 anal fin rays. Osbeck (in translation) had stated of his *adscensionis*: 'the body is narrow, grey at the top, white below, about a foot long ... the mouth oblong ... the teeth small'. None of these characters applies to Cuvier's *ascensionis*. However, Osbeck's description agrees well with another carangid locally abundant at Ascension that Bloch & Schneider (1801, p. 30) described from Brazil as *Scomber dentex*. The original description and a photograph of the holotype (catalogue no. ZMB 14112 in the Humboldt Museum in Berlin), kindly provided by Dr H.-J. Paepke, leave no doubt as to the identity of *S. dentex*. Sixteen junior names (a list of which is held by the Commission Secretariat) have been proposed for this commercially important and broadly distributed antitropical species but it has usually been referred to as *Caranx* (or *Pseudocaranx*) *dentex* in recent works. Examples of usage of this name are Barnard (1927, p. 546), Hureau & Monod (1973), Smith-Vaniz & Berry (1978), Smith-Vaniz, Bauchot & Desoutter (1979, p. 6), Gushiken (1983), Masuda et al. (1984), Seki (1984), Smith-Vaniz (1984, 1986a, 1986b), Smith & Heemstra (1986, p. 654), Edwards & Glass (1987, p. 1380), Paxton, Hoese, Allen & Hanley (1989, p. 582), Randall, Smith & Feinberg (1990, p. 20) and Yamaoka, Han & Taniguchi (1992). *Scomber dentex* Bloch & Schneider, 1801 is the type species by monotypy of *Pseudocaranx* Bleeker, 1863 (p. 82).

4. Wheeler (1963) used the name *Scomber glaucus* Linnaeus, 1758 as a senior synonym of '*Caranx adscensionis* (Osbeck, 1771)', and did not mention *S. dentex* Bloch & Schneider. He stated that *adscensionis* had been accepted by many authors (he listed four references) for a widely distributed southern Atlantic carangid. We have found eight references in which Osbeck's name was used rather than *dentex*:

Cuvier & Valenciennes (1833, p. 103), Fowler (1936, pp. 693, 699), Lozano y Rey (1952), Albuquerque (1954), Blanc & Bauchot (1961, pp. 489, fig. 8), Smith (1965), Smith & Smith (1966), and Blache, Cadenat & Stauch (1970, p. 312). In the following eight references the authors applied Osbeck's name, most using the combination '*Caranx ascensionis* [sic] (Osbeck)', to the other carangid fish from Ascension that Cuvier (1833, p. 102) named *C. ascensionis* (now widely known as *Caranx lugubris* Poey, [1860]; see para. 7 below): Clark (1915, p. 385), Fowler (1925, 1927, 1928, 1931), Fowler & Ball (1925), Schultz (1943, pp. 86, 88–89) and Harry (1953, p. 128). Additional confusion was introduced by Fowler (1949, p. 77) whose synonymy for '*Caranx ascensionis* (Osbeck)' included references that apply to both *dentex* and *lugubris*. Under the heading *Caranx ascensionis*, Günther (1860, p. 432; 1876, p. 132, pl. 85) had listed '?*Scomber ascensionis* Osbeck' and '*Caranx ascensionis* Forst.' and 'Cuv. & Val.'.

5. Further difficulty was created by Bloch & Schneider (1801, p. 33) in their description of *Scomber glaucus* Linnaeus which included the following statement: 'Ab hoc utroque, si vere idem est, diversum facit Scombrum Adscensionis ab Osbeckio descriptum p. 387 quem Linnaeus cum glauco conjunxit, J.R. Forster Ms. IV. 83.' [From both of these, if truly the same, Linnaeus takes *Scomber adscensionis* from Osbeck, p. 387, which he united with *glaucus*]. This has been erroneously interpreted by some authors as having made available the name *adscensionis*, which was then cited as *Scomber ascensionis* Bloch & Schneider, 1801 or credited to Forster in the same work.

6. We agree with Wheeler's (1963) conclusion that the name *Scomber glaucus* Linnaeus refers in part to the same taxon as '*Caranx adscensionis* (Osbeck)', but recognition of *glaucus* as the valid name in place of *dentex* Bloch & Schneider would result in considerable confusion and nomenclatural instability. In the 230 years since Linnaeus introduced the name it has never been applied to a species of *Caranx*. Instead, some authors have used the combination *Trachinotus glaucus* (Linnaeus) for the species now widely known as *Trachinotus ovatus* (Linnaeus, 1758) (p. 296; published as *Gasterosteus ovatus*), while others have used it for *Trachinotus goodei* Jordan & Evermann, 1896 (p. 943; described from the 'West Indies, north to west Florida'). The name *ovatus* has been adopted by, for example, Hureau & Monod (1973), Smith-Vaniz & Berry (1978), Smith-Vaniz, Bauchot & Desoutter (1979), Smith-Vaniz (1986b), Smith-Vaniz, Quéro & Desoutter (1990) and Robins et al. (1991a). Wheeler (1991, p. 173, fig. 12) identified specimen ZIU 202 [93] in the Linnaean fish collection in the Zoological Museum of the University of Uppsala as the holotype of *T. ovatus*. We propose that *Scomber glaucus* Linnaeus, 1758 be suppressed and, to avoid uncertainty in the future, that '*Scomber adscensionis* Osbeck, 1771' be placed on the Official Index and *Gasterosteus ovatus* Linnaeus, 1758 on the Official List.

7. *Caranx lugubris* Poey, [1860] (p. 222) (see Norman, 1938, pp. 135–137 for the dates of publication of Poey's works) was described from Cuba and compared to *Caranx ascensionis* Cuvier (authorship credited by Poey to Forster) which Poey wrongly believed to represent a different species. Poey's type specimen (760 mm total length) is probably not extant (it was not listed by Howell-Rivero, 1938). Poey ([1866], p. 328) placed both his own species of [1860], *C. lugubris* and *C. frontalis*, in the synonymy of *ascensionis* and referred to Cuvier (1833, p. 102, pl. 249). Poey

(1875, p. 150) again listed all three names but gave the combination *Carangus lugubris* in bold type, indicating that it was the valid name, and noted that Cuvier's name *C. ascensionis* had been used for a different species (i.e. *dentex* Bloch & Schneider) described earlier by Osbeck. In his discussion of Forster's fish drawings and paintings, Wheeler (1981, p. 791) correctly noted that *Caranx lugubris* Poey, [1860] and *Caranx ascensionis* Cuvier both apply to the same species, the latter name having priority. We know of only three other references in which Cuvier's name has been adopted as the valid name (Cunningham, 1910, pp. 91, 103; Zugmayer, 1911, p. 106; Randall, Smith & Feinberg, 1990, p. 20), the last-mentioned quoting Wheeler as the basis for the usage. Randall, Allen & Steene (1990), however, reverted to the use of *Caranx lugubris*.

8. In their monumental work on the fishes of North and Middle America, Jordan & Evermann (1896, p. 925) treated *Caranx lugubris* Poey, [1860] as valid. Although these authors were aware of the description of *Caranx ascensionis* Cuvier (listing the name as a synonym) they obviously considered it to be an invalid junior secondary homonym in *Caranx*. In their synonymy of *C. lugubris*, Jordan & Evermann began with the following entry: '*Scomber ascensionis*, Bloch & Schneider, Syst. Ichth., 33, 1801; not *Scomber ascensionis* of Osbeck, which may be *Caranx guara*'.

9. The overwhelming majority of subsequent authors have followed Jordan & Evermann (1896) in recognizing *Caranx lugubris* as the valid name. As already noted (para. 1), Osbeck's '*Caranx adscensionis*' is not an available name but it has been used, often spelt '*ascensionis*', and Cuvier's *C. ascensionis* has been treated as a junior homonym. Such widely followed references as the American Fisheries Society's list of common and scientific names of fishes (Robins at al., 1991b and earlier editions), Smith (1965), CLOFNAM (Hureau & Monod, 1973, p. 374), FAO species identification sheets (Smith-Vaniz & Berry, 1978; Smith-Vaniz, 1984), Masuda et al. (1984), Smith and Heemstra (1986, p. 647), and Paxton, Hoese, Allen & Hanley (1989, p. 577) have all adopted *Caranx lugubris*. In a far-from-complete search we found a total of 80 references in which this name was adopted; a list of these references is held by the Commission Secretariat. Smith-Vaniz (1984, 1986a) noted the priority of Cuvier's name, that *C. lugubris* had had much greater usage in both the fishery and taxonomic literature, and that in the interest of nomenclatural uniformity and stability *lugubris* should be retained.

10. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the following specific names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
   (a) *glaucus* Linnaeus, 1758, as published in the binomen *Scomber glaucus*;
   (b) *ascensionis* Cuvier in Cuvier & Valenciennes, 1833, as published in the binomen *Caranx ascensionis*;

(2) to place on the Official List of Generic Names in Zoology the name *Pseudocaranx* Bleeker, 1863 (gender: masculine), type species by monotypy *Scomber dentex* Bloch & Schneider, 1801;

(3) to place on the Official List of Specific Names in Zoology the following names:
   (a) *dentex* Bloch & Schneider, 1801, as published in the binomen *Scomber dentex* (specific name of the type species of *Pseudocaranx* Bleeker, 1863);

(b) *lugubris* Poey, [1860], as published in the binomen *Caranx lugubris*;
(c) *ovatus* Linnaeus, 1758, as published in the binomen *Gasterosteus ovatus* Linnaeus, 1758;

(4) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:
(a) *glaucus* Linnaeus, 1758, as published in the binomen *Scomber glaucus* and as suppressed in (1)(a) above;
(b) *ascensionis* Cuvier in Cuvier & Valenciennes, 1833, as published in the binomen *Caranx ascensionis* and as suppressed in (1)(b) above;
(c) *adscensionis* Osbeck, 1771, as published in the binomen *Scomber adscensionis* (an unavailable name).

References

Albuquerque, R.M. 1954. Peixes de Portugal e ilhas adjacentes. Chavas para a sua determinaçao. *Portugaliae acta biologica*, (B)**5**: 1–1167.

Artedi, P. 1738. *Ichthyologia sive opera omnia de Piscibus* ..., C. Linnaeus (Ed.). 5 parts. Lugduni Batavorum.

Barnard, K.H. 1927. A monograph of the marine fishes of South Africa. Part 2. *Annals of the South African Museum*, **21**(2): 417–1065.

Blache, J., Cadenat, J. & Stauch, A. 1970. Clés de détermination des poissons de mer signalés dans l'atlantique oriental (entre le 20e parallèle Nord et le 15e parallèle Sud). *Faune Tropicale*, **18**: 1–479.

Blanc, M. & Bauchot, M.L. 1961. Sur quatre genres de Carangidae (Téléostéens Perciformes) de la Côte Occidentale d'Afrique; *Decapterus*, *Caranx*, *Trachurus*, *Suraeus*. *Bulletin du Muséum National d'Histoire Naturelle*, (2)**32**(6): 484–497.

Bleeker, P. 1863. Mémoire sur les poissons de la côte de Guinée. *Natuurkundige Verhandelingen van de Hollandsche Maatschappij der Wetenschappen te Haarlem*, (2)**18**: 1–136.

Bloch, M.E. & Schneider, J.G. 1801. *Systema ichthyologiae iconibus cx illustratum* ..., vol. 1. lx, 584 pp. Berlin.

Clark, R.S. 1915. Atlantic fishes of the Scottish National Antarctic Expedition. *Report on the Scientific Results. Scottish National Antarctic Expedition. S.Y.* Scotia *1902–1904*, **4**(16): 379–401.

Cunningham, J.T. 1910. On the marine fishes and invertebrates of St. Helena. *Proceedings of the Zoological Society of London*, **1910**: 86–131.

Cuvier, G. & Valenciennes, A. 1833. *Histoire naturelle des poissons*, vol. 9. 512 pp. Paris.

Edwards, A.J. & Glass, C.W. 1987. The fishes of Saint Helena Island, South Atlantic Ocean. 2. The pelagic fishes. *Journal of Natural History*, **21**(6): 1367–1394.

Fowler, H.W. 1925. Fishes of Guam, Hawaii, Samoa, and Tahiti. *Bulletin of the Bernice P. Bishop Museum*, **22**: 1–38.

Fowler, H.W. 1927. Fishes of the tropical central Pacific. *Bulletin of the Bernice P. Bishop Museum*, **38**: 1–32.

Fowler, H.W. 1928. The fishes of Oceania. *Memoirs of the Bernice P. Bishop Museum*, **10**: 1–540.

Fowler, H.W. 1931. The fishes of Oceania — Supplement 1. *Memoirs of the Bernice P. Bishop Museum*, **11**: 313–381.

Fowler, H.W. 1936. The marine fishes of West Africa based on the collection of the American Museum Congo Expedition, 1909–1915. Part 2. *Bulletin of the American Museum of Natural History*, **70**(2): 607–1493.

Fowler, H.W. 1949. The fishes of Oceania — Supplement 3. *Memoirs of the Bernice P. Bishop Museum*, **12**(2): 37–186.

Fowler, H.W. & Ball, S.C. 1925. Fishes of Hawaii, Johnston Island, and Wake Island. *Bulletin of the Bernice P. Bishop Museum*, **26**: 1–31.

Günther, A.C.L.G. 1860. *Catalogue of the fishes in the British Museum*, vol. 2. 548 pp. British Museum, London.

Günther, A.C.L.G. 1876. Andrew Garrett's Fische der Südsee. Heft 5. *Journal of the Museum Godeffroy*, **2**(11): 129–216.

Günther, A.C.L.G. 1880. Report on the shore fishes procured during the voyage of H.M.S. *Challenger* in the years 1873–1876. *Report of the Scientific Results of the Voyage of H.M.S.* Challenger *1873–76*, Zoology, **1**(6): 1–82.

Gushiken, S. 1983. Revision of the carangid fishes of Japan. *Galaxea*, **2**: 135–264.

Harry, R.R. 1953. Ichthyological field data of Raroia Atoll, Tuamotu Archipelago. *Atoll Research Bulletin*, **18**: 1–190.

Howell y Rivero, L. 1938. List of the fishes, types of Poey, in the Museum of Comparative Zoology. *Bulletin of the Museum of Comparative Zoology* (Harvard University), **82**(3): 169–227.

Hureau, J.C. & Monod, T. (Eds.). 1973. *Check-list of the fishes of the north-eastern Atlantic and of the Mediterranean* (CLOFNAM), vol. 1. xxii, 683 pp. UNESCO, Paris.

Jordan, D.S. & Evermann, B.W. 1896. The fishes of North and Middle America: a descriptive catalogue of the species of fish-like vertebrates found in the waters of North America, north of the Isthmus of Panama. Part 1. *Bulletin of the United States National Museum*, **47**: 1–1240.

Linnaeus, C. 1758. *Systema Naturae*, Ed. 10, vol. 1. 824 pp. Salvii, Holmiae.

Linnaeus, C. 1764. *Museum S:ae R:ae M:tis Adolphi Friderici Regis ... Aves. Amphibia. Pisces describuntur. Tomi Secundi Prodromus*. 111 pp. Salvii, Holmiae.

Lozano y Rey, L. 1952. Pesces fisoclistos, subserie toracicos. *Memorias de la Real Academia de Ciencias Exactas, Fisicas y Naturales de Madrid* (Serie de Ciencias Naturales), **14**: 379–705.

Masuda, H., Amaoka, K., Araga, C., Uyeno, T. & Yoshino, T. (Eds.). 1984. *The fishes of the Japanese Archipelago*. 370 pp. Tokyo.

Norman, J.R. 1938. Notes on the dates etc. of the 'Memorias', 'Repertorio', 'Synopsis' and 'Enumeratorio' of Felipe Poey. *Journal of the Society for the Bibliography of Natural History*, **1**(5): 135–137.

Osbeck, P. 1757. *Dagbok öfver en Ostindisk Resa aren 1750, 1751, 1752* ... [6], 376, [16] pp. Stockholm.

Osbeck, P. 1765. *Reisenach Ostindien und China*, Ed. 2. xxiv, 552 pp., 13 pls. Rostock. [A translation by J.G. Georgi from the 1757 Swedish work].

Osbeck, P. 1771. *A voyage to China and the East Indies*, vol. 2. 147 pp. London. [Translated by J.R. Forster from the 1765 German version].

Paxton, J.R., Hoese, D.F., Allen, G.R. & Hanley, J.E. 1989. *Zoological catalogue of Australia*, vol. 7 (Pisces. Petromyzontidae to Carangidae). 665 pp. Australian Government Publishing Service, Canberra.

Poey, F. [1860], [1861]. Poissons de Cuba. Pp. 115 336 [1860], 337 356 [1861] *in*: *Memorias sobre la historia natural de la Isla de Cuba, acompañadas de sumarios Latinos y extractos en Francés*, vol. 2. Habana.

Poey, F. [1866]. Revista de los tipos Cuvierianos y Valenciennianos correspondientes á los Peces de la isla de Cuba. Pp. 308 338 *in*: *Repertorio Fisico-natural de la Isla de Cuba*, vol. 1. Habana.

Poey, F. 1875. Enumeratio Piscium Cubensium. *Anales de la Sociedad Española de Historia Natural*, **4**(1): 75–161.

Randall, J.E., Allen, G.R. & Steene, R.C. 1990. *Fishes of the Great Barrier Reef and Coral Sea*. xx, 507 pp., 7 pls., 1314 figs. University of Hawaii Press, Honolulu.

Randall, J.E., Smith, C.L. & Feinberg, M.N. 1990. Report on fish collections from Rapa, French Polynesia. *American Museum Novitates*, **2966**: 1–44.

Robins, C.R., Bailey, R.M., Bond, C.E., Brooker, J.R., Lachner, E.A., Lea, R.N. & Scott, W.B. 1991a. World fishes important to North Americans. *American Fisheries Society. Special Publication*, **21**: 1–243.

Robins, C.R., Bailey, R.M., Bond, C.E., Brooker, J.R., Lachner, E.A., Lea, R.N. & Scott, W.B. 1991b. A list of common and scientific names of fishes from the United States and Canada, Ed. 5. *American Fisheries Society. Special Publication*, **20**: 1–183.

Schultz, L.P. 1943. Fishes of the Phoenix and Samoan Islands collected in 1939 during the expedition of the U.S.S. *Bushnell*. *Bulletin of the United States National Museum*, **180**: 1–316.

Seale, A. 1901. Report of a mission to Guam. Part 2 — Fishes. *Occasional Papers of the Bernice P. Bishop Museum*, **1**(3): 61–128.

Seki, M.P. 1984. The food and feeding habits of the white trevally, *Pseudocaranx dentex* (Bloch and Schneider 1801), in the northwestern Hawaiian Islands. Pp. 192–208 *in* Grigg, R.W. & Tanoue, K.Y. (Eds.), *Proceedings of the Second Symposium on Resource Investigations in the northwestern Hawaiian Islands*, vol. 2. University of Hawaii Sea Grant College Program, Honolulu.

Smith, J.L.B. 1965. *The sea fishes of Southern Africa*. 580 pp. Cape Town.

Smith, J.L.B. & Smith, M.M. 1966. *Fishes of the Tsitsikama Coastal National Park*. 161 pp. Johannesburg.

Smith, M.M. & Heemstra, P.C. (Eds.). 1986. *Smiths' sea fishes*. xx, 1047 pp., 144 pls., text figs. Macmillan South Africa, Johannesburg.

Smith-Vaniz, W.F. 1984. Carangidae. *In* Fischer, W. & Bianchi, G. (Eds.), *FAO species identification sheets for fishery purposes. Western Indian Ocean (Fishing Area 51)*, vol. 1. Food and Agricultural Organization of the United Nations, Rome.

Smith-Vaniz, W.F. 1986a. Carangidae. Pp. 638–661 *in* Smith, M.M. & Heemstra, P.C. (Eds.), *Smiths' sea fishes*. xx, 1047 pp., 144 pls., text figs. Macmillan South Africa, Johannesburg.

Smith-Vaniz, W.F. 1986b. Carangidae. Pp. 815-844 *in* Whitehead, P.J.P., Bauchot, M.-L., Hureau, J.-C., Nielsen, J. & Tortonese, E. (Eds.), *Fishes of the North-eastern Atlantic and the Mediterranean*, vol. 2. UNESCO, Paris.

Smith-Vaniz, W.F., Bauchot, M.L. & Desoutter, M. 1979. Catalogue critiques des types de poissons du Muséum National d'Histoire Naturelle (suite). Familles des Carangidae et des Nematistiidae. *Bulletin Muséum National d'Histoire Naturelle*, Section A (Zoologie), (4)**1**, Supplément 2: 1–66.

Smith-Vaniz, W.F. & Berry, F.H. 1978. Carangidae. *In* Fischer, W., Bianchi, G. & Scott, W.B. (Eds.), *FAO species identification sheets, eastern central Atlantic*, vol. 1. Food and Agricultural Organization of the United Nations, Rome.

Smith-Vaniz, W.F., Quéro, J.C. & Desoutter, M. 1990. Carangidae. Pp. 729–755 *in* Quéro, J.C., Hureau, J.-C., Karrer, C., Post, A. & Saldanha, L. (Eds.), *Check-list of the fishes of the eastern tropical Atlantic*, vol. 2. JNICT, Portugal.

Streets, T.H. 1877. Contributions to the natural history of the Hawaiian and Fanning Islands and Lower California. *Bulletin of the United States National Museum*, **7**: 1–172.

Wheeler, A. 1963. The nomenclature of the European fishes of the subfamily Trachinotinae. *Annals and Magazine of Natural History*, (13)**5**(57): 529–540.

Wheeler, A. 1981. The Forsters' fishes. Pp. 781–806 *in* James Cook, *The Journal of H.M.S.* Resolution *1772–1775*. Genesis Publications, Guildford.

Wheeler, A. 1991. The Linnaean fish collection in the Zoological Museum of the University of Uppsala. *Zoological Journal of the Linnean Society*, **103**: 145–195.

Yamaoka, K., Han, H.-S. & Taniguchi, N. 1992. Genetic dimorphism in *Pseudocaranx dentex* from Tosa Bay, Japan. *Nippon Suisan Gakkaishi*, **58**(1): 39–44.

Zugmayer, E. 1911. Poissons provenant des campagnes du Yacht *Princesse-Alice* (1901–1910). *Résultats des Campagnes Scientifiques accomplies sur son yacht par Prince Albert 1er*, **35**: 1–174.

Case 2877

Lycognathophis Boulenger, 1893 (Reptilia, Serpentes): proposed conservation

Hobart M. Smith

Department of Environmental, Population and Organismic Biology, University of Colorado, Boulder, Colorado 80309–0334, U.S.A.

Van Wallach

Department of Herpetology, Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts 02138, U.S.A.
(Present address *4 Potter Park, Cambridge, MA 02138, U.S.A.*)

Abstract. The purpose of this application is to conserve the name *Lycognathophis* Boulenger, 1893, a genus of snake from the Seychelles. The name is consistently used but is a junior objective synonym of *Scopelophis* Fitzinger, 1843, for which suppression is proposed.

---

1. *Psammophis seychellensis* Schlegel, 1837 (p. 155) is probably the only endemic snake species of the Seychelle Islands (Nussbaum, 1984). The species was assigned to various polytypic genera in its early history (see Dowling, 1990), and was first placed in a genus of its own by Fitzinger (1843, p. 26), who named it *Scopelophis*. That name was not used, however, until 1990 when Dowling revived it. Its neglect was initially due to rejection of availability of generic names such as Fitzinger's which were published without description but which included previously described species.

2. Boulenger (1893, p. 317) also concluded that *P. seychellensis* was generically unique and proposed the name *Lycognathophis* for it. Since then the species has consistently been known as *Lycognathophis seychellensis*. Dowling (1990) revived *Scopelophis* for it, stating that 'Inasmuch as this invalid (and misleading) name [*Lycognathophis*] has appeared in relatively few publications, and placing it in synonymy will have little overall effect on the taxonomic literature, I here refer *Lycognathophis* Boulenger, 1893 to the synonymy of *Scopelophis* Fitzinger, 1843'. However, the title of Dowling's publication mentioned only *Lycognathophis*.

3. On the contrary, *Lycognathophis* has been used consistently as a valid name for a century, during which time *Scopelophis* had not been used at all. Boulenger's name has appeared in at least 23 works by 21 different authors between 1893 and 1991 (e.g. Vesey-FitzGerald, 1948; Honegger, 1966; Underwood, 1967; Gaymer, 1968; Blanc, 1971; Dowling & Duellman, 1978; Welch, 1982; Nussbaum, 1984; McDowell, 1987; Coborn, 1991). The full list of references, held by the Commission Secretariat, is certainly not exhaustive, especially for the popular writings.

4. The span and frequency of usages for these two names overwhelmingly justify invoking Article 79(c) of the Code, since 'the senior name has not been used as a valid name during the immediately preceding fifty years' and the junior name has been applied '... by at least 5 different authors and in at least 10 publications during the

same period'. We regard the usages of *Lycognathophis* cited above as distinctly more than 'relatively few' publications, and also point out that a number of those cited are highly influential synoptic works, as for example Welch (1982), Nussbaum (1984) and Williams & Wallach (1989). We therefore view the revival of *Scopelophis* as an unnecessary, undesirable and significant threat to nomenclatural stability.

5. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the generic name *Scopelophis* Fitzinger, 1843 for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Generic Names in Zoology the name *Lycognathophis* Boulenger, 1893 (gender: masculine), type species by monotypy *Psammophis seychellensis* Schlegel, 1837;

(3) to place on the Official List of Specific Names in Zoology the name *seychellensis* Schlegel, 1837, as published in the binomen *Psammophis seychellensis* (specific name of the type species of *Lycognathophis* Boulenger, 1893);

(4) to place on the Official List of Rejected and Invalid Names in Zoology the name *Scopelophis* Fitzinger, 1843, as suppressed in (1) above.

References

Blanc, C.P. 1971. Les reptiles de Madagascar et des îles voisines. *Annales de l'Université de Madagascar*, **8**: 95–178.

Boulenger, G.A. 1893. *Catalogue of the snakes in the British Museum (Natural History)*, vol. 1. xiii, 448 pp. British Museum (Natural History), London.

Coborn, J. 1991. *The atlas of snakes of the world*. 591 pp. T.F.H. Publications, Neptune City.

Dowling, H.G. 1990. Taxonomic status and relationship of the genus *Lycognathophis*. *Herpetologica*, **46**: 60–66.

Dowling, H.G. & Duellman, W.E. 1978. *Systematic herpetology: a synopsis of families and higher categories*. 118 pp. Herpetological Information & Search Service, New York.

Fitzinger, L.J.F.J. 1843. *Systema Reptilium*. Fasciculus primus (Amblyglossae). 106, vi pp. Braumüller & Seidel, Vindobonae.

Gaymer, R. 1968. Amphibians and reptiles of the Seychelles. *British Journal of Herpetology*, **4**: 24–28.

Honegger, R.E. 1966. Beobachtungen an der Herpetofauna der Seychellen. *Salamandra*, **2**: 21–36.

McDowell, S.B. 1987. Systematics. Pp. 1–50 *in* Seigel, R.A., Collins, J.T. & Novak, S.S. (Eds.), *Snakes: ecology and evolutionary biology*. Macmillan, New York.

Nussbaum, R.A. 1984. Snakes of the Seychelles. Pp. 361–377 *in* Stoddart, D.R. (Ed.), *Biogeography and ecology of the Seychelles Islands*. Junk, The Hague.

Schlegel, H. 1837. *Essai sur la physionomie des serpens*, vol. 1 (Partie générale). xxviii, 251 pp. Amsterdam.

Underwood, G. 1967. *A contribution to the classification of snakes*. 79 pp. British Museum (Natural History), London.

Vesey-FitzGerald, D. 1948. Reptiles and amphibians from the Seychelles Archipelago. *Annals and Magazine of Natural History*, (2)**14**: 577–583.

Welch, K.R.G. 1982. *Herpetology of Africa: a checklist and bibliography of the orders Amphisbaenia, Sauria and Serpentes*. x, 293 pp. Krieger, Florida.

Williams, K.L. & Wallach, V. 1989. *Snakes of the world*, vol. 1 (Synopsis of snake generic names). viii, 234 pp. Krieger, Florida.

Case 2953

Loris E. Geoffroy Saint-Hilaire, 1796 (Mammalia, Primates): proposed conservation

Anthea Gentry

c/o The Secretariat, International Commission on Zoological Nomenclature, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.

Colin P. Groves

Department of Archaeology and Anthropology, Australian National University, Canberra, A.C.T. 0200, Australia

J.E. Hill

12 Penlee Close, Edenbridge, Kent TN8 5NA, U.K.

Paulina D. Jenkins

Department of Zoology, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.

Abstract. The purpose of this application is to conserve the name *Loris* E. Geoffroy Saint-Hilaire, 1796 for the slender loris (Primates, family LORIDAE Gray, 1821) of Sri Lanka and southern India. The name is threatened by the senior subjective synonym *Tardigradus* Boddaert, 1785. The latter has been treated as a junior homonym of the sloth name *Tardigradus* Brisson, 1762 and only once (in 1902) used as valid.

---

1. The proposed rejection of Brisson's (1762) work *Regnum Animale* (Case 2928; BZN **51**: 135–146) renders the name *Tardigradus* Brisson, 1762 (pp. 12, 21) (sloths, Xenarthra) unavailable and its conservation is not proposed. Brisson's genus included both the three-toed and two-toed sloths. The name *Bradypus* Linnaeus, 1758 (p. 34; type species *B. tridactylus* Linnaeus, 1758 by subsequent designation by Miller & Rehn, 1901, p. 8) is currently in use for the three-toed sloths, and *Choloepus* Illiger, 1811 (p. 108; type species *B. didactylus* Linnaeus, 1758 by subsequent designation by Gray, 1827, p. 275) is in use for the two-toed sloths. On rejection of the (1762) work *Tardigradus* Brisson will cease to preoccupy *Tardigradus* Boddaert, 1785 (pp. 43, 67) and the latter would become the valid generic name for the slender loris of Sri Lanka and southern India, currently called *Loris* E. Geoffroy Saint-Hilaire, 1796. A change of generic name to *Tardigradus* would also have implications for the family name LORIDAE Gray, 1821.

2. Geoffroy Saint-Hilaire (1796, pp. 48, 49; see also the description on pp. 29–32) included two nominal species in his genus *Loris*, '*Loris tardigradus*' with a reference to *Lemur tardigradus* Linnaeus, 1758 (p. 29), and the new nominal species *Loris gracilis* E. Geoffroy Saint-Hilaire, 1796 which was based on an illustrated description

by Buffon & Daubenton (1770, pp. 111–118, pls. 31–33). As has been pointed out by a number of authors (see, for example, Stone & Rehn, 1902, p. 138; Palmer, 1904, p. 384, footnote; W.C.O. Hill, 1933, p. 90; Ellerman & Morrison-Scott, 1951, p. 190), Geoffroy's name *gracilis* refers to the slender loris and is therefore a junior synonym of *tardigradus* Linnaeus, 1758, whilst his '*tardigradus*' is a misidentification of Linnaeus's taxon and refers to the slow loris of south-east Asia. In 1812 Geoffroy Saint-Hilaire (p. 163) restricted *Loris* to the single species *L. gracilis* and placed his misidentified '*tardigradus*' (under the new name *bengalensis*) in the new genus *Nycticebus*, the name of which is currently in use for the slow lorises. Geoffroy's original error in his use of the name *tardigradus* was unfortunately followed during the 19th and early 20th centuries and *Nycticebus tardigradus* was used for the slow loris (currently called *Nycticebus coucang* (Boddaert, 1785), a senior synonym of *N. bengalensis* E. Geoffroy Saint-Hilaire, 1812).

3. Linnaeus (1758) described the nominal species *Lemur tardigradus* and included four previous references:

> L. ecaudatus. *Mus*[eum] *Ad*[olphi] *Fri*[derici], [Class] 1, p. 3.
>
> Simia ecaudata, unguibus indicis subulatis. *Syst*[ema] *nat*[urae], [Ed. 6], p. 5 [recte p. 3], no. 2.
>
> Animal cynocephalum tardigradum. *Seb*[a] *mus.*, vol. 1, p. 55, pl. 35, figs. 1, 2 & pl. 47, fig. 1.
>
> Animal elegantissimum robinsoni. *Raj* [Ray] [Synopsis methodica animalium] *quadr*[upedum] ..., p. 161.

All four of these references refer to the slender loris. Ray (1693), Seba (1734) and Linnaeus (1754, 1758) gave the locality of the species as 'Ceylon'.

4. In 1811 Illiger (p. 73) proposed the replacement name *Stenops* for *Loris* Geoffroy Saint-Hilaire and gave *Lemur tardigradus* Linnaeus as the type. This is a valid fixation of type species for *Loris* also (Article 67h of the Code). Recognition of the type as *tardigradus* sensu Geoffroy Saint-Hilaire (as opposed to the true *tardigradus* Linnaeus, i.e. *gracilis* E. Geoffroy Saint-Hilaire) would cause the transfer of the generic name from the slender to the slow lorises. Thomas (1911, p. 129) noted '*L. tardigradus* [Linnaeus has] been made the type of *Loris* Geoffroy, 1796'. He also noted that, on the authority of Lönnberg (curator at the Uppsala museum), the specimen recorded in Linnaeus's (1754) catalogue *Museum Adolphi Friderici*, which could have been one of those illustrated by Seba (1734), was present in the Linnaean collection. One of us (C.P.G.) has seen this specimen in the Linnaeus House in Uppsala. It is almost certainly a Seba specimen.

5. Stone & Rehn (1902, p. 138) designated '*Tardigradus loris* Boddaert, 1785 = *Lemur tardigradus* Linnaeus, 1758' as the type species of *Tardigradus* Boddaert and adopted the latter as the generic name for the slender loris. The use of Boddaert's name *Tardigradus* rather than *Loris* has not been followed by other authors. The name *Loris* has appeared in works on primate biology, ecology and conservation, as well as taxonomy. Recent works in which the name has been used include Corbet & J.E. Hill (1991, p. 93; 1992, p. 162), Ellerman & Morrison-Scott (1951, p. 190), Groves (1989, p. 98; 1993, p. 248), Honacki, Kinman & Koeppl (1982, p. 220), Jenkins (1987, pp. 136–143) and Nowak (1991, p. 404). Ever since Illiger (1811) and Geoffroy Saint-Hilaire (1812) *Loris* has been regarded as containing only the single

species *L. tardigradus* (Linnaeus, 1758), i.e. *L. gracilis* E. Geoffroy Saint-Hilaire, 1796. To maintain the usage of the name *Loris* we propose that *Tardigradus* Boddaert be suppressed.

6. The replacement name *Stenops* Illiger, 1811 was used by some authors in the early 19th century (see W.C.O. Hill, 1933). The name *Loridium* Rafinesque, 1815 (p. 54) was a further replacement for *Loris* which has never been used.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the name *Tardigradus* Boddaert, 1785 for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Generic Names in Zoology the name *Loris* E. Geoffroy Saint-Hilaire, 1796 (gender: masculine), type species (under Article 67h of the Code) by subsequent designation by Illiger (1811) *Lemur tardigradus* Linnaeus, 1758;

(3) to place on the Official List of Specific Names in Zoology the name *tardigradus* Linnaeus, 1758, as published in the binomen *Lemur tardigradus* (specific name of the type species of *Loris* E. Geoffroy Saint-Hilaire, 1796);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:

(a) *Tardigradus* Boddaert, 1785, as suppressed in (1) above;

(b) *Stenops* Illiger, 1811 (a junior objective synonym of *Loris* E. Geoffroy Saint-Hilaire, 1796);

(c) *Loridium* Rafinesque, 1815 (a junior objective synonym of *Loris* E. Geoffroy Saint-Hilaire, 1796).

References

Boddaert, P. 1785. *Elenchus Animalium*, vol. 1 (Sistens Quadrupedia). Pp. 43–174. Rotterdam.

Brisson, M.J. 1762. *Regnum Animale in classes IX distributum, sive synopsis methodica* ..., Ed. 2. 296 pp. Haak, Leiden.

Buffon, G.L.L. de & Daubenton, L.J.M. 1770. *Histoire naturelle générale et particulière, avec la description du Cabinet du Roi*, Ed. 2, vol. 13. 317 pp., 57 pls. Paris.

Corbet, G.B. & Hill, J.E. 1991. *A world list of mammalian species*, Ed. 3. viii, 243 pp. Natural History Museum, London.

Corbet, G.B. & Hill, J.E. 1992. *The mammals of the Indomalayan region: a systematic review*. 488 pp., 45 figs., 177 maps. Natural History Museum, London.

Ellerman, J.R. & Morrison-Scott, T.C.S. 1951. *Checklist of Palaearctic and Indian mammals 1758 to 1946*. 810 pp. British Museum (Natural History), London.

Geoffroy Saint-Hilaire, E. 1796. Mémoire sur les rapports naturels des makis, *Lemur* L. et description d'une espèce nouvelle de mammifère. *Magasin Encyclopédique, ou journal des sciences, des lettres et des arts*, (2)**1**(1): 20–50.

Geoffroy Saint-Hilaire, E. 1812. Suite au tableau des quadrumanes. Second famille. Lemuriens. Strepsirrhini. *Annales du Muséum National d'Histoire Naturelle* (Paris), **19**: 156–170.

Gray, J.E. 1821. On the natural arrangement of vertebrose animals. *London Medical Repository*, **15**(1): 296–310.

[Gray, J.E.] 1827. Synopsis of the species of the Class Mammalia, as arranged with reference to their organisation by Cuvier, and other naturalists, with specific characters, synonyma, &c &c. Vol. 5 *in* Griffith, E., Smith, C.H. & Pidgeon, E. (Eds.), *The animal kingdom arranged in conformity with its organisation, by the Baron Cuvier, with additional descriptions of all the species hitherto named, and of many not before noticed*. 391 pp. Whittaker, London.

Groves, C.P. 1989. *A theory of human and primate evolution*. xii, 375 pp. Clarendon Press, Oxford.

Groves, C.P. 1993. Order Primates. Pp. 243–277 *in* Wilson, D.E. & Reeder, D.A.M. (Eds.), *Mammal species of the world. A taxonomic and geographic reference*, Ed. 2. xviii, 1206 pp. Smithsonian Institution Press, Washington & London.

Hill, W.C.O. 1933. A monograph on the genus *Loris*. With an account of the external, cranial and dental characters of the genus: a revision of the known forms; and the description of a new form from northern Ceylon. *Ceylon Journal of Science*, (B, Zoology & Geology)**18**(1): 89–132.

Honacki, J.H., Kinman, K.E. & Koeppl, J.W. (Eds.). 1982. *Mammal species of the world*. ix, 694 pp. Allen Press, Lawrence, Kansas.

Illiger, C. 1811. *Prodromus systematis Mammalium et Avium* ... xviii, 301 pp. Berlin.

Jenkins, P.D. 1987. *Catalogue of primates in the British Museum (Natural History) and elsewhere in the British Isles*. x, 189 pp. British Museum (Natural History), London.

Linnaeus, C. 1754. Classis 1. Quadrupedia. Pp. 1–12 *in*: *Museum S:rae R:ae M:tis Adolphi Friderici Regis ... Quadrupedia, Aves, Amphibia, Pisces, Insecta, Vermes describuntur et determinantur*. xxx, 96, [8] pp., 33 pls. Holmiae.

Linnaeus, C. 1758. *Systema naturae*, Ed. 10, vol. 1. 824 pp. Salvii, Holmiae.

Miller, G.S. & Rehn, J.A.G. 1901. Systematic results of the study of North American land mammals to the close of the year 1900. *Proceedings of the Boston Society of Natural History*, **30**(1): 1–352.

Nowak, R.M. (Ed.). 1991. *Walker's mammals of the world*, Ed. 5. 1629 pp. (in 2 vols.). Johns Hopkins University Press, Baltimore & London.

Palmer, T.S. 1904. *Index Generum Mammalium: a list of the genera and families of mammals*, vol. 1 (A-O). Pp. 1–492. United States Department of Agriculture, Biological Survey Division, Washington. North American Fauna, No. 23.

Rafinesque, C.S. 1815. *Analyse de la nature* ... 214 pp. Author, Palermo.

Ray, J. 1693. *Synopsis methodica animalium Quadrupedum et Serpentini generis*. 336 pp. London.

Seba, A. 1734. *Locupletissimi rerum naturalium thesauri accurata descriptio, et iconibus artificiosissimus expressio, per universam physices historiam...*, vol. 1. [27], 178 pp., 111 pls. Amsterdam. (See Holthuis, L.B. 1969. *Zoologische Mededelingen*, **43**(19): 239–152 for the dates of publication of the four vols. of Seba's work).

Stone, W. & Rehn, J.A.G. 1902. A collection of mammals from Sumatra, with a review of the genera *Nycticebus* and *Tragulus*. *Proceedings of the Academy of Natural Sciences of Philadelphia*, **54**(1): 127–142.

Thomas, O. 1911. The mammals of the tenth edition of Linnaeus; an attempt to fix the types of the genera and the exact bases and localities of the species. *Proceedings of the Zoological Society of London*, **1911**: 120–158.

Comments on the proposed conservation of the specific name of *Xerophila geyeri* Soós, 1926 (Mollusca, Gastropoda)
(Case 2870; see BZN **51**: 105–107)

(1) P. Bouchet
Muséum national d'Histoire naturelle, 55 rue Buffon, 75005 Paris, France

I object to the proposal by Dr Gittenberger to suppress five specific names introduced between 1881 and 1884 in order to conserve the name *Xerophila geyeri* Soós, 1926.

1. The senior names have not been used as valid in the last 50 years but they have not remained forgotten after their publication. *Helix arceuthophila* and *H. ycaunica*, both of Mabille (1881), were cited as valid species by Locard (1882, pp. 103, 106; 1894, p. 157) and Westerlund (1889, pp. 254, 255). They were also listed in the synonymy of *Helicella ramburi* (Mabille, 1867) by Germain (1928, p. 303; 1930, p. 276) and Richardson (1980, p. 94, who erroneously dated the names from 1867). *Helix vicianica* Bourguignat in Locard, 1882, was recorded by *Zoological Record* for 1882 (Martens, 1883, p. 69) and listed as a valid species by Westerlund (1889, p. 254) and Locard (1894, p. 161). This nominal species was placed in the synonymy of *Helicella rugosiuscula* (Michaud, 1831) by Germain (1928, p. 308; 1930, p. 277) and Richardson (1980, p. 96). The nominal species *Helix deana* and *H. pleurestha*, both of Berthier (1884), recorded by *Zoological Record* for 1884 (Martens, 1885, p. 68), were listed as a single, valid species by Westerlund (1889, pp. 237, 238) and Locard (1894, p. 156). The names were placed in the synonymy of *Helicella striata* (Müller, 1774) by Germain (1928, p. 314; 1930, p. 280) and Richardson (1980, pp. 181, 182). All five names were listed by Pilsbry (1894, p. 256) as 'insufficiently known forms' [of *Helicella*].

2. The problem posed by these names is thus not that they have been forgotten but that they have been misinterpreted and erroneously treated as synonyms of other taxa. Admittedly this misinterpretation is understandable; the original descriptions were not accompanied by illustrations and important characters of the genitalia were not described. However, authors working on Pleistocene faunas have used *Trochoidea geyeri* in palaeoclimatic reconstructions, naturally basing their identifications on shell characters alone. The identity of the names *H. ycaunica*, *arceuthophila*, *vicianica*, *deana* and *pleurestha* could therefore very well have been interpreted from shell characters only. The Bourguignat collection has been in the Geneva museum for more than a century, and the types of the nominal species now under discussion were available for examination. It would seem simply that, prior to Gittenberger, no one has cared to do so.

3. It is true that many nominal taxa were introduced by Mabille, Locard, Servain and other members of Bourguignat's 'Nouvelle École', but the same can be said of Westerlund, Pallary, Monterosato and others. That many of them are indeed synonyms is no justification to reject in bulk all the names introduced by these authors. Gittenberger's attitude (para. 3 of the application) is explained, but not excused, by several decades of bias against, and deliberate ignorance of, the works and taxa of these authors. However, a basic principle of nomenclature is that each work and each name has to be evaluated on an individual basis on its own merit.

After a long period during which all 'Nouvelle École' names were systematically lumped into the synonymy of classical European species, the pendulum is now swinging back. Some names are being rehabilitated as a result of recent critical work. In this respect, it is worth citing de Winter (1990, p. 230) from his paper rehabilitating the name *Helix phorochaetica* Bourguignat, 1864: 'Notwithstanding the good description and figures provided by Bourguignat (1864), the species was placed by both Hesse (1921) and Germain (1930) in the synonymy of *Trichia villosa*, no doubt because of Bourguignat's reputation'. And also, about hygromiid species described from Portugal by 'Nouvelle École' authors: 'It turned out that Nobre (1930, 1941) has synonymized several nominal taxa somewhat too easily, thus burying some valid species' (Gittenberger, 1993, p. 283).

4. Gittenberger gives 25 references of publications where the name *Trochoidea geyeri* has been used during the last 50 years. Strictly speaking, this fulfils the requirements of Article 79c(2) but this limited usage demonstrates that the species remains little known outside a small circle of specialist workers.

5. Finally, I wish to place Dr Gittenberger's application in the wider perspective of the taxonomy of Palaearctic pulmonates. Although 'Digging in the graveyard of synonymy' (Gittenberger, 1993) may not be the most innovative part of taxonomical research, many more names of Palaearctic Pulmonata, especially HELICOIDEA, introduced by late 19th century authors need to be evaluated and their true identity established. Especially in the Alpine and Mediterranean regions, every year new species are discovered, new synonymies are established, and 'old' species are re-evaluated. Due to convergence in shell characters this is particularly true in the very speciose family HYGROMIIDAE. This family is currently undergoing major taxonomic reappraisals, with the consequence of inevitable name changes at the species-, genus- and family-group levels. Thus, nomenclature is not likely to be destabilized when the Principle of Priority is applied to the yet unstabilized nomenclature of the species of *Trochoidea* s.l.

6. Therefore, rather than making a counter proposal, e.g. placing one of Mabille's (1881) names on the Official List, I suggest that the proposals on BZN **51**: 106 should simply be rejected, and the Principle of the First Reviser should be applied to deal with Mabille's two (1881) names *H. arceuthophila* and *H. ycaunica*.

Additional references

Germain, L. [1928]. Les Helicidae de la faune française. *Archives du Muséum d'Histoire Naturelle de Lyon*, **13**: 1–484.

Germain, L. 1930. Mollusques terrestres et fluviatiles (première partie). *Faune de France*, **21**: 1–477.

Gittenberger, E. 1993. Digging in the graveyard of synonymy, in search of Portuguese species of *Candidula* Kobelt, 1871 (Mollusca: Gastropoda Pulmonata: Hygromiidae). *Zoologische Mededelingen*, **67**: 283–293.

Locard, A. 1894. *Les coquilles terrestres de France. Description des familles, genres et espèces*. 370 pp. Baillière, Paris.

Martens, E. von. 1883, 1885. *The Zoological Record*. Mollusca. 96 pp. (1883, for 1882); 86 pp. (1885, for 1884). London.

Pilsbry, H.A. 1895. *Manual of conchology*, series 2 (Pulmonata), vol. 9, part 36. Pp. 161–336. Philadelphia.

Richardson, L. 1980. Helicidae: catalog of species. *Tryonia*, **3**(1): 1–350.

Westerlund, C.A. 1889. *Fauna der in der paläarctischen Region ...lebenden Binnenconchylien.* II. Genus *Helix*. 473, 31 pp. Lund.

Winter, A.J. de. 1990. Little known land snails from the French Alps (Pulmonata). *Basteria*, **54**: 227–237.

(2) Edmund Gittenberger

Nationaal Natuurhistorisch Museum, P.O. Box 9517, NL 2300 RA, Leiden, The Netherlands

Dr Bouchet writes (above) of his reaction to my application to conserve *Trochoidea geyeri* Soós, 1926 by the suppression of five earlier unused synonyms. I disagree with him on several points, of which I would like to mention the following in particular (following his para. numbers):

1. The most recent 'use' of the earlier names, in Bouchet's view, is that by Richardson (1980) in a very long list of names, composed uncritically and not accompanied by descriptions. We have to go far back in time, as shown by Bouchet, to find similar (incorrect) citations in synonymy lists. There is no use of the names in a real sense.

3. I did not merely confine myself to names in the literature. I studied the 'Nouvelle École' type specimens. This time-consuming activity was not undertaken 'to reject in bulk all the names', as Bouchet suggests. As a result of this project some senior synonyms which refer to a well-known species were discovered. I proposed that these should be suppressed to further the stability of nomenclature, in line with the Code's explicit provisions (e.g. the Preamble, Articles 23b and 79). Unscientific feelings of loyalty to ancient colleagues should be discounted. The fact that among the hundreds of names a few have been found that can be currently applied does not demonstrate that 'the pendulum is now swinging back'.

4. Bouchet concludes that there is 'limited usage' of *geyeri* because I gave only 25 references to the name. Apparently he thinks, and suggests in his text, that I could find only those 25 citations in the literature. This is simply wrong, however. I stopped after 25, selecting them from various languages and subdisciplines in biology, to indicate frequent usage. I did so advised by the Commission Secretariat.

Comments on the proposed conservation of *Clavella* Oken, 1815 and *Pennella* Oken, 1815 (Crustacea, Copepoda)

(Case 836; see BZN **50**: 273–276)

(1) Dale W. Rice

U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Mammal Laboratory, 7600 Sand Point Way N.E., Building 4, Seattle, Washington 98115–0070, U.S.A.

I am strongly in favor of the proposal to conserve the generic name *Pennella* Oken, 1815. Species of *Pennella* are common parasites of cetaceans so the name appears

frequently in the cetological literature. Cetologists have long been confused as to whether the name should be spelled *Pennella* or *Penella*. The few authors of papers (e.g. Hogans, 1987) on cetacean parasites who attribute the name continue to cite Oken (1815), either in ignorance of, or in spite of, Opinion 417 which declared Oken's *Lehrbuch* (vol. 3) unavailable. This confusion can be resolved only by placing *Pennella* Oken, 1815 on the Official List of Generic Names, and its type species *P. diodontis* Oken, 1815 on the Official List of Specific Names. I know of no counter arguments for either proposal.

Additional reference

Hogans, W.E. 1987. Morphological variation in *Pennella balaenoptera* and *P. filosa* (Copepoda: Pennellidae) with a review of the genus *Pennella* Oken, 1816 parasitic on Cetacea. *Bulletin of Marine Science*, **40**(3): 442–453.

(2) Anthea Gentry

International Commission on Zoological Nomenclature, c/o The Natural History Museum, London SW7 5BD, U.K.

Para. 2 of the application records that three names (*Stentor*, *Pan* and *Panthera*) have already been conserved from Oken's (1815–1816) work. A number of other names have also been conserved. *Bombina* Oken, 1816 (Amphibia) was conserved in Opinion 453 (March 1957), *Anilius* Oken, 1816 (Reptilia) in Opinion 651 (April 1963), *Acropora* Oken, 1815 (Cnidaria, Anthozoa) in Opinion 674 (October 1963), *Doto* Oken, 1815 (Mollusca, Gastropoda) in Opinion 697 (April 1964), *Bugula* Oken, 1815 and *Scruparia* Oken, 1815 in Opinion 902 (April 1970), and *Halecium* Oken, 1815 (Cnidaria, Hydrozoa) in Opinion 1220 (September 1982). An application for the conservation of two further anthozoan names will be published shortly.

Comment on the proposed suppression of the catalogues of A.A.H. Lichtenstein (1796, 1797) and D.H. Schneider (1800), with the conservation of some Lichtenstein (1796) names (Insecta and Arachnida)
(Case 2862; see BZN **51**: 108–115)

Robert D. Pope

c/o Department of Entomology, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.

I have examined in detail the coleopteran names in this case and agree with all Dr Kerzhner's conclusions. At least as far as Coleoptera are concerned it is important that these works be suppressed, for otherwise they would present a constant threat to nomenclatural stability. However, as mentioned in Table 1 and para. 14(c) of the application, eight beetle specific names published by Lichtenstein (1796) should be conserved with his authorship.

Comment on the proposed conservation of the specific names of *Aphodius rufus* (Moll, 1782), *A. foetidus* (Herbst, 1783) and *Aegialia rufa* (Fabricius, 1792) (Insecta, Coleoptera)
(Case 2878; see BZN **51**: 121–127)

Giovanni Dellacasa
C.P. 921, 16100 Geneva, Switzerland

I should like to comment on the problem of *Scarabaeus* (now *Aphodius*) *scybalarius* Fabricius, 1781.

Since Landin (1956) discovered that Fabricius's type of *Scarabaeus scybalarius* is in fact a blackish specimen of the taxon currently known as *Aphodius rufus* (Moll, 1782), there has been a nomenclatural problem. Landin, however, did not consult the Commission (para. 3 of the application). Silfverberg (1977) was the first author to address this problem and, with no regard for nomenclatural continuity, considered that the name *scybalarius* must be adopted in place of *rufus* Moll. At the same time he recognised that the specific name of *Scarabaeus* (now *Rhysothorax*) *rufus* Fabricius, 1792 was a junior primary homonym of *Scarabaeus* (now *Pachnoda* or *Dischista*) *rufus* De Geer, 1778 (para. 7 of the application) and proposed the new name *rufinus* for Fabricius's taxon.

In their application, Krell, Stebnicka & Holm have proposed the suppression of *scybalarius*, misapplied by most authors, and the adoption of the name *foetidus* Herbst, 1783 for the taxon, and the conservation of the names *rufus* Moll and *rufus* Fabricius. However, in my view these proposals are formally incorrect because of Silfverberg's previous (1977, 1979) actions. Silfverberg recognized that *scybalarius* had been misapplied by authors and strictly applied the Principle of Priority to *rufus* Moll and *rufus* Fabricius. Though these actions did not maintain stability in the nomenclature, Krell et al. are now addressing a problem that no longer exists.

In my view there are two courses that could be followed to solve the nomenclatural problem:

Either: (1) To set aside the lectotype of *Aphodius scybalarius* (Fabricius, 1781) designated by Landin (1956) and designate a neotype in the sense the name has been used by most authors (i.e. for the species correctly known as *foetidus* Herbst, 1783), and to conserve the names *rufus* Moll, 1782 and *rufus* Fabricius, 1792, notwithstanding their primary homonymy with *rufus* De Geer, 1778.

This is the more simple course which, if adopted, would avoid any changes in the nomenclature of these widely spread, common and well known taxa and would maintain the 150 year-old interpretation of the names.

Or: (2)(a) To suppress the name *scybalarius* Fabricius, 1781 and adopt for this species (in the sense used by most authors) the name *foetidus* Herbst, 1783;

(b) to adopt the name *Aphodius arcuatus* (Moll, 1785), the first available synonym of the junior homonym *A. rufus* (Moll, 1782);

(c) to adopt the name *Rhysothorax spissipes* (LeConte, 1878), the first available synonym of the junior homonym *Rhysothorax rufus* (Fabricius, 1792). In consequence the name *rufinus* Silfverberg, 1977 becomes an unnecessary replacement name.

This second procedure is much more complex than the first but is nomenclaturally more correct and, without any doubt, more logical than the proposals of Krell, Stebnicka & Holm.

Comment on the proposed conservation of the specific name of *Lithobius piceus* L. Koch, 1862 (Chilopoda)
(Case 2919; see BZN **51**: 133–134)

Alessandro Minelli
Dipartimento di Biologia, Università di Padova, Via Trieste 75, I-135121 Padova, Italy

I wish to express my full support for Dr E.H. Eason's application proposing the conservation of the specific name of the centipede *Lithobius piceus* L. Koch, 1862.

Comment on the proposed conservation of HEMIDACTYLIINI Hallowell, 1856 (Amphibia, Caudata)
(Case 2869; see BZN **50**: 129–132; **51**: 153–156, 264–265)

Hobart M. Smith
Department of EPO Biology, University of Colorado, Boulder, Colorado 80309-0334, U.S.A.

David B. Wake
Museum of Vertebrate Zoology, University of California, Berkeley, California 94720, U.S.A.

We respond to Prof Dubois's comment (published in BZN **51**: 264–265) on our application.

1. At the time that Dubois (1984) revived MYCETOGLOSSINI Bonaparte, 1850 to replace HEMIDACTYLIINI Hallowell, 1856 (which had been adopted by Wake, 1966, for the first time since its proposal), HEMIDACTYLIINI had been used (note the 'non-exhaustive' list in para. 4 of the application) in at least 10 works by nine authors, and by the time that our application was submitted those figures had increased to at least 16 and 15 respectively.

2. Article 23b of the current (1985) Code came into effect on 1 January 1973 and was therefore operating at the time that Dubois (1984) adopted MYCETOGLOSSINI. This Article states: 'The Principle of Priority is to be used to promote stability and is not intended to be used to upset a long-accepted name in its accustomed meaning through the introduction of an unused name that is its senior synonym'. Therefore, Bonaparte's name should not automatically have been adopted by Dubois and, accordingly, it would have been correct for authors to continue to use HEMIDACTYLIINI after Dubois pointed out the earlier family-group name, whilst referring the problem to the Commission.

3. We requested the suppression of MYCETOGLOSSINI in conformance with Article 79 and within the spirit of the current Code. The Code encourages nomenclatural stability by permitting the suppression (under the plenary powers) of long-unused names that threaten established, current usage. Admittedly Cope (1889), Dunn (1926) and Wake (1966) overlooked Bonaparte's name but this was not then known

in the active literature, and in 1966 the name was a 'nomen oblitum' and could not have been adopted without Commission action, even if known (Article 23b(ii) of the 1964 Code). Names unused for over 100 years and buried in unused literature are easily overlooked, and have been so countless times by reputable and diligent taxonomists; the belated discovery of such names is not to the discredit of reasonable nomenclatural search.

4. Article 80 of the current Code makes it plain that Wake's (1993) exhortation for 'maintaining the traditional taxonomy until the matter receives formal action' (cited by Dubois in his comment, para. 3) is the explicit regulation under the Code, and not just a personal stand.

5. In the present case no useful purpose would be served by upsetting the established usage for nearly 30 years of a family-group name by one never used since its proposal over 100 years ago, based on a never-used generic name. It is to prevent that sort of mindless adherence to priority that the provisions of Article 79 exist.

Additional references

Cope, E.D. 1889. The Batrachia of North America. *Bulletin of the United States National Museum*, **34**: 1–525.

Dunn, A. 1926. *The salamanders of the family Plethodontidae*. viii, 441 pp. Smith College, Northampton, Massachusetts.

Comments on the proposed conservation of some mammal generic names first published in Brisson's (1762) *Regnum Animale*
(Case 2928; see BZN **51**: 135–146, 266–267)

(1) Colin P. Groves
Department of Archaeology and Anthropology, Australian National University, Canberra, A.C.T. 0200, Australia

I fully support this application.

1. Brisson's (1762) work should finally be suppressed. It is not binominal and indeed, bearing in mind its early date, there is no reason why it should have been. Yet a number of mammalian generic names in common use have traditionally been dated from the book, and would be threatened were its suppression not accompanied by action for their conservation.

2. The cases of *Tragulus* and *Cuniculus* are especially horrendous. The long-standing fixation of *Cervus javanicus* Osbeck as the type of *Tragulus* (by Ellerman & Morrison-Scott, 1951, as noted by Gentry) depends on the maintenance of Brisson's name; the type of the next available usage of *Tragulus* (i.e. Pallas, 1767) is *Capra pygmaea*, the Royal antelope, which is currently placed in *Neotragus* H. Smith, 1827. Thus we would have:

	Current usage	Prospective name
Royal antelope	*Neotragus pygmaeus*	*Tragulus pygmaeus*
Lesser mouse-deer	*Tragulus javanicus*	*Moschiola javanica*

This would be an unpleasant and confusing double change of nomenclature.

3. The type of *Cuniculus* Brisson has been fixed as *Mus paca*, the paca. The next available generic name for this species is *Agouti* Lacepède, 1799, a word which is the

same as the vernacular name (in English, French, German and Spanish (*'aguti'*), among others) for quite a different animal, and the same as the name of a type of tegumentary pattern exemplified by the agouti, but not by the paca! The next available usage of the name *Cuniculus* is that of Meyer (1790), which refers to the European rabbit. We would then have:

	Current usage	Prospective name
Paca	*Cuniculus paca*	*Agouti paca*
European rabbit	*Oryctolagus cuniculus*	*Cuniculus cuniculus*

These changes are just as undesirable as in the *Tragulus* case, with the additional element of confusion with a vernacular name.

4. It is true that several of the names it is proposed to conserve are available from other early authors, most of them from Brünnich (1771). However, to ignore their use in Brisson and date them from Brünnich would be unsafe. This was a period of prolific writing by naturalists (Pallas, Scopoli, Güldenstaedt, Blumenbach, not to mention Linnaeus's own students Osbeck and Thunberg); many of their works are poorly known and investigation of them could well turn up names that might antedate Brünnich and so threaten stability.

It is for these reasons that I urge support for Gentry's proposal in full.

(2) Don E. Wilson
Biodiversity Programs, National Museum of Natural History, Smithsonian Institution, Washington, DC 20560, U.S.A.

I am writing to comment on the proposed rejection of Brisson's (1762) work, with conservation of 11 mammal generic names. I have read the application by Anthea Gentry with a great deal of interest. The publication is an excellent summary of the situation and I applaud the scholarship demonstrated.

Nevertheless, I find myself in disagreement with portions of the application. I believe stability would best be served by simply rejecting Brisson's work, and by not conserving the generic names listed in the proposals. The application outlines quite nicely why Brisson (1762) is unavailable due to binominal inconsistency, and rejecting it for nomenclatural purposes would be a useful step. This is the course followed by most recent authors and it would be helpful for the Commission to rule on it officially.

However, I see no need to conserve the generic names that have been used by authors over the years, in spite of the arguments for established usage put forth in the application. Nine of the 11 names are available from other authors and have been so attributed by most recent workers. Changing these attributions to revert to Brisson would be more disruptive than stabilizing at this point. The only names that would create major changes are *Glis* and *Cuniculus*.

Most recent authors have rejected *Cuniculus* as being unavailable from Brisson and have used *Agouti* Lacepède, 1799. Continuing this usage in no way requires the adoption of *Cuniculus* Meyer, 1790 as the valid name for the European rabbit, *Oryctolagus* Lilljeborg, 1874, as argued in the application.

The name *Glis* has probably enjoyed the widest usage of the 11 in recent years but the review by Wahlert, Sawitzke & Holden (1993) clearly outlines the problem and a solution, namely the use of *Myoxus* Zimmermann, 1780 and MYOXIDAE in place of the

unavailable *Glis* and GLIRIDAE. Ignoring this by conserving a generic name from an otherwise unavailable work seems pointless.

Although I am clearly not an unbiased observer, I would also argue that there is merit in following the most complete review of currently used mammalian names (Wilson & Reeder, Eds., 1993). This work provides a complete reference for currently used mammalian names for the non-specialist, and conserving the 11 names suggested in the application would require changing the attribution of nine generic names to Brisson's authorship and changing the names of two genera and one family. I would guess that a new edition of *Mammal species of the world* is unlikely to appear before the year 2004, which would result in a considerable period during which general usage would not follow the Commission's ruling. Thus, I would argue against conservation of the names on the basis of stability of nomenclature.

I hope the Commission will vote to reject Brisson (1762) with no qualifying conservation of generic names.

(3) Robert S. Voss

Department of Mammalogy, American Museum of Natural History, Central Park West at 79th Street, New York, N.Y. 10024–5192, U.S.A.

I am writing to support Case 2928.

The availability and application of Brisson's generic names for mammals urgently require a decision by the Commission. Even though Brisson's work is not consistently binominal, 12 of his generic names (reviewed by Gentry) are in common and almost univeral usage. Only one (*Odobenus*) has so far been formally conserved. Gentry makes a persuasive argument for conserving the remaining 11 (*Philander*, *Pteropus*, *Glis*, *Cuniculus*, *Hydrochoerus*, *Meles*, *Lutra*, *Hyaena*, *Tapirus*, *Tragulus* and *Giraffa*) and for designating type species. In each case, the action she recommends will contribute to nomenclatural stability.

The issue is now urgent because the availability of some of Brisson's genera has been challenged in two recent and influential checklists cited by Gentry (Honacki et al., 1982; Wilson & Reeder, 1993) without regard to the serious instability that would result if all were rejected. I urge the Commissioners to act in accordance with Gentry's sensible recommendations.

(4) John H. Wahlert

Vertebrate Paleontology, American Museum of Natural History, Central Park West at 79th Street, New York, N.Y. 10024–5192, U.S.A.

I am writing in response to the application on *Regnum Animale* (1762). I do not support the conservation of Brisson's generic name *Glis* for the edible dormouse and I support the retention of *Myoxus* for this species.

In a work co-authored with Sawitzke & Holden (1993) I have recently investigated the original literature on the appropriate name for the edible dormouse and concluded that it should be *Myoxus* Zimmermann, 1780, and not *Glis* Brisson, 1762.

This conclusion is by no means new. Trouessart (1897, p. 453), mentioning the first edition (1756) of Brisson's work, rejected it as non-binominal and used *glis*

(i.e. *Sciurus glis* Linnaeus) as a specific name. Schulze, Kükenthal & Heider (1932, p. 1375) rejected *Glis* Brisson.

M.E. Holden arrived independently at the same conclusion that *Myoxus* is the valid name; we combined our view for publication. Holden has also published (in Wilson & Reeder, 1993) a separate chapter, 'Family Myoxidae', in which she recognizes *Myoxus* as the generic name of the edible dormouse.

I have consulted Dr Malcolm C. McKenna, who is completing a revision of G.G. Simpson's (1945) *Classification of mammals*. He, too, considers the generic name *Myoxus* to be valid for the edible dormouse.

I am aware that the name *Glis* is commonly used today but the name *Myoxus* is well known. When European and Asian colleagues visit New York and we discuss dormouse systematics, all know both the generic name and the family name MYOXIDAE. *Myoxus* and MYOXIDAE seem current to me because they are used in the references that are the starting point for all of my research on rodent anatomy and phylogeny, namely Tullberg (1899) and Winge (1941).

For the following reasons I recommend that the valid generic name *Myoxus* be retained and that the invalid name *Glis* be rejected: (a) there is a strong scholarly tradition for rejecting *Glis* because the name in Brisson (1762) is not binominal; (b) three mammalian systematists independently and concurrently found that the generic name *Myoxus* is fully acceptable according to the Code whereas the name *Glis* is not; (c) the generic and family names *Myoxus* and MYOXIDAE are very well known internationally, despite extensive and recent use of *Glis*.

Additional references

Schulze, F.E., Kükenthal, W. & Heider, K. 1929. *Nomenclator animalium generum et subgenerum*, vol. 3, part 1 (Fa–Halya). Pp. 1299–1458. Preussischen Akademie der Wissenschaften zu Berlin, Berlin.

Tullberg, T. 1899. Ueber das System der Nagethiere, eine phylogenetische studie. I, II. *Nova Acta Regiae Societatis Scientiarum Upsaliensis*, (3)**18**(1, 2): 1–328.

Winge, H. 1941. *The interrelationships of the mammalian genera*, vol. 2 (Rodentia, Carnivora, Primates). 376 pp. Forlag, København. [Translated from the Danish by E. Deichmann & G.M. Allen].

(5) P.A. Morris

Department of Biology, Royal Holloway College, University of London, Egham, Surrey TW20 0EX, U.K.

I am particularly interested in *Glis*. This name was triumphantly discounted at last year's international conference on dormice (in Italy), thereby throwing everyone into confusion! Some used *Glis* Brisson, 1762, some *Myoxus* Zimmermann, 1780, and the editors of the published papers now have to decide whether or not to 'correct' manuscripts before they are published. This is a strongly undesirable muddle.

Surely the purpose of scientific names is to allow stability and unambiguous international communication. In the region where the taxon occurs everyone uses *Glis*, even the man in the street. Some very recent substitution by *Myoxus* is a thoroughly retrograde step, undermining the whole point of internationally recognised names.

I see no need for this change and no benefit from it. I hope that the name *Glis* will be conserved.

All 11 of Brisson's generic names are sufficiently familiar and widely used that the case for their retention is surely overwhelming.

(6) Sydney Anderson
Department of Mammalogy, American Museum of Natural History, Central Park West at 79th Street, New York, N.Y. 10024–5192, U.S.A.

This case concerns names from Brisson (1762). One name, *Odobenus*, has been conserved previously. *Tragulus* may warrant conservation but I see no necessity and little desirability in taking any action on the other 10 names. Subsequent authors may be cited for *Philander*, *Pteropus*, *Meles*, *Lutra*, *Hyaena*, *Tapirus* and *Giraffa*. Alternate names are available for *Glis* and *Cuniculus*, namely *Myoxus* and *Agouti*, and the alternate spelling *Hydrochaeris* for *Hydrochoerus*. I have been using the names *Agouti* and *Hydrochaeris*, as have some other authors, in my South American work. If there is a problem with *Cuniculus* Meyer, 1790 vs. *Oryctolagus* Lilljeborg, 1874 for the European rabbit I recommend just conserving *Oryctolagus*. That is simple and need not concern what we use in South America.

(7) Peter Grubb
35 Downhills Park Road, London N17 6PE, U.K.

I agree with everything that is written in the application on Brisson's (1762) names and am especially happy that *Tragulus* has been sorted out. The principal reason for supporting the application is that it creates stability in the nomenclature. It does away with the uncertainty that exists when authors are not in agreement over the availability of names because they do not yet have the guidance of the Commission. I see no problem in accepting *Philander*, *Pteropus*, *Meles*, *Lutra*, *Hyaena*, *Tapirus* and *Giraffa* as these names will remain in general use when attributed to Brisson (1762).

As is clear from the application, *Tragulus* Brisson could not be taken from a later use of the name. The next available name seems to be *Lagonebrax* Gloger, 1841 (p. 137), based on *Moschus javanicus* (Osbeck, 1765) and *Moschiola meminna* (Erxleben, 1777). *Lagonebrax* predates *Moschiola*, which seems to be available from Hodgson (1844, p. 292), but the use of this unfamiliar and very rarely cited name, overlooked in leading checklists, in place of either *Tragulus* (unspotted chevrotains) or *Moschiola* (the Indian spotted chevrotain) would not contribute to nomenclatural stability. HYEMOSCHIDAE Gray, 1872 (pp. 5, 99; based on the water chevrotain of Africa) would replace the established name TRAGULIDAE Milne Edwards, 1864. The proposal to confirm Brisson (1762) as the author of *Tragulus* should certainly be endorsed.

Even if *Myoxus* Zimmermann, 1780 had some currency long ago, *Glis* Brisson, 1762 (and GLIRIDAE) has been so generally accepted, particularly by European authors (who are most likely to refer to this taxon), that it would be very unfortunate to disturb the name.

Hydrochoerus and *Cuniculus*, both of Brisson (1762), refer to South and Central American mammals and would be most commonly cited by American authors or authors working in America. The alternative names *Hydrochaeris* Brünnich, 1771

and *Agouti* Lacepède, 1799 have become widely accepted in the American literature. Examples are Miller & Rehn (1901) and Miller (1912) for *Agouti*, and Hall & Kelson (1959), Cabrera (1961), Honacki, Kinman & Koeppl (Eds., 1982), Anderson & Jones (Eds., 1984), Redford & Eisenberg (1992) and Wilson & Reeder (Eds., 1993) for both genera. Admittedly there was a change of heart when *Hydrochoerus* and *Cuniculus* were listed by Miller (1924) and Miller & Kellogg (1955).

According to Tate (1935), *Hydrochoerus* was the predominant name used for the capybara at least up to 1930; he did not even cite *Hydrochaeris* Brünnich, 1771. Though this latter name is now widely used in American texts (see above), to return to *Hydrochoerus* involves only a very minor difference in spelling.

The status of *Agouti* as a name for the paca is uncertain. Tate's (1935) historical review demonstrated long–term lack of consensus over the generic name for the taxon. After its original citation, *Agouti* came back into use early this century and has continued to be employed until the present day, as the above references to checklists indicate. Anthea Gentry's application has demonstrated that *Cuniculus* has been very widely cited. The use of both *Agouti* and *Cuniculus* represents a long–term state of instability. There are likely to be differences of opinion as to which should be retained. The application suggests that adoption of *Agouti* has not been generally followed. American workers in particular might take the view that the use of *Agouti* has had a substantial history and has become general in recent decades (references cited above). Macdonald (Ed., 1984) employed *Glis* and *Hydrochoerus* of Brisson but also *Agouti*, rejecting *Cuniculus* Brisson without comment.

On the other hand, there is a difficulty with the use of *Agouti*. *Agouti* Lacepède, 1799 is commonly or usually regarded as the type genus of AGOUTIDAE Gray, 1821 (p. 304). However, Gray erected this family to include *Agoutis* Cuvier (= *Dasyprocta* Illiger, 1811; the agoutis) and *Calogenus* [sic] F. Cuvier (i.e. *Coelogenys* Illiger, 1811, = *Cuniculus* Brisson, 1762 and *Agouti* Lacepède; the pacas). The type genus of AGOUTIDAE is thus *Agoutis* Cuvier, not *Agouti* Lacepède. Whether or not AGOUTIDAE Gray threatens the stability of DASYPROCTIDAE Smith, 1842 (the family including the agoutis) it is not available as the family name for the pacas when treated as a separate taxon.

The rejection of *Cuniculus* Brisson would thus raise an unresolved problem. While this strengthens the case for retaining *Cuniculus*, to which I am entirely sympathetic, the issues relating to this name may prove to be contentious.

Additional references

Gloger, C.W.L. 1841. *Gemeinnütziges Hand- und Hilfsbuch der Naturgeschichte ...* , part 2. Pp. 81–160. Schulz, Breslau.

Gray, J.E. 1821. On the natural arrangement of vertebrose animals. *London Medical Repository*, **15**(1): 296–310.

Gray, J.E. 1872. *Catalogue of the ruminant Mammalia (Pecora, Linnaeus) in the British Museum*. viii, 102 pp. British Museum, London.

Hall, E.R. & Kelson, K.R. 1959. *The mammals of North America*, vol. 2. Pp. viii, 547–1083, 79. Roland Press, New York.

Hodgson, B.H. 1844. Classified catalogue of the mammals of Nepal. *Calcutta Journal of Natural History*, **4**: 284–294.

Illiger, C. 1811. *Prodromus systematis Mammalium et Avium* ... xviii, 301 pp. Berlin.

Macdonald, D. (Ed.). 1984. *The encyclopedia of mammals*, Ed. 2. xv, 895, xvi–xlviii pp. Unwin Hyman, London.

Miller, G.S. 1912. List of North American land mammals in the United States National Museum, 1911. *Bulletin of the United States National Museum*, **79**: 1–455.

Miller, G.S. & Kellogg, R. 1955. List of North American Recent mammals, 1923. *Bulletin of the United States National Museum*, **205**: 1–954.

Miller, G.S. & Rehn, J.A.G. 1901. Systematic results of the study of North American land mammals to the close of the year 1900. *Proceedings of the Boston Society of Natural History*, **30**(1): 1–352.

Redford, K.H. & Eisenberg, J.F. 1992. *Mammals of the neotropics*, vol. 2 (The southern cone. Chile, Argentina, Uruguay, Paraguay). 430 pp. University of Chicago Press, Chicago.

Tate, G.H.H. 1935. The taxonomy of the genera of neotropical hystricoid rodents. *Bulletin of the American Museum of Natural History*, **68**: 295–447.

(8) David L. Harrison & Paul J.J. Bates
Harrison Zoological Museum (Foundation for Systematic Research), Bowerwood House, St Botolph's Road, Sevenoaks, Kent TN13 3AQ, U.K.

We are writing to support the application by Anthea Gentry for the conservation of 11 mammal generic names first published in M.J. Brisson's *Regnum Animale* in 1762. Although this work is now generally accepted to be non-binominal there are certain generic names which have had established usage for more than 230 years. We consider that alteration of these widely used names is highly undesirable after such long and general usage. We strongly recommend to the Commissioners that these names should be conserved and we fully support the arguments for this as set out in the application. There are equally good arguments for placing on the Official List of Specific Names those listed on BZN **51**: 143.

We trust that the Commission will give careful consideration to these important proposals.

(9) Zdzislaw Pucek
Polish Academy of Sciences, Mammal Research Institute, 17–230 Bialowieza, Poland

I am the editor of *Acta Theriologica*. I am rather conservative and would like to maintain the 11 mammal generic names from Brisson (1762) reviewed in the application. Some inconsequential lapses in the formal use of binominal nomenclature by Brisson should be treated as normal for that time. The long-lasting usage of the names for over 230 years is, in my opinion, the main reason for the official acceptance of them, with all the formal consequences.

AUTHORS IN VOLUME 51 (1994)

	Page
Anderson, S.	346
Ansell, W.F.H.	267
Audisio, P.A.	309
Bailey, R.M.	262
Bardet, N.	247
Bates, P.J.J.	348
Bilton, D.T.	227
Bock, W.J.	52, 253
Bogan, A.E.	92
Booth, R.G.	256
Bouchet, P.	336
Bowman, T.E.	224
Branch, W.R.	151
Brown, B.V.	312
Brown, D.S.	247
Burn, R.	256
Camras, S.	31
Chippindale, P.	155
Christensen, C.C.	217
Cook, F.R.	152, 155
Costa, W.J.E.M.	46
Cowie, R.H.	217
Cox, M.J.	154
Crandall, F.B.	298
Crosskey, R.W.	258
Dellacasa, G.	340
Dixon, J.R.	250
Donovan, D.T.	219
Dubois, A.	237, 240, 264
Dundee, H.A.	150, 153
Eason, E.H.	133
Evenhuis, N.L.	217
Fochetti, R.	309
Foster, G.N.	257
Frost, D.R.	237
Gentry, A.	135, 332, 339
Géry, J.	35
Gittenberger, E.	105, 338
Glut, D.F.	50
Gobin, J.	10
Good, D.A.	152
Goodrich, M.A.	128
Griffiths, G.C.D.	28
Groves, C.P.	332, 342
Grubb, P.	346
Hahn, G.	41
Harrison, D.L.	348
Hawksworth, D.L.	188
Hill, J.E.	266, 332
Hillis, D.M.	152, 155
Holm, E.	121
Huber, P.	156
Hunt, A.P.	265
Inger, R.F.	152
Jacobs, L.L.	50
Jäch, M.A.	25
Jansson, A.	43
Jenkins, P.D.	332
Jennings, M.R.	149
Kempf, E.K.	304
Kerzhner, I.M.	41, 108
Kottelat, M.	320
Krell, F.-T.	121, 306
Lanza, B.	150
Lazara, K.J.	47
Lim, K.K.P.	320
Løken, A.	232
Loof, P.A.A.	102
Lucas, S.G.	265
Mackie, A.S.Y.	10
McNeill, J.	188
Mahnert, V.	35
Mancino, G.	150
Mayden, R.L.	262
Minelli, A.	341
Moore, T.E.	237
Morris, P.A.	345
Mühle, H.	43
Nelson, G.H.	45
Ng, P.K.L.	320
Nicholls, E.L.	50
Nussbaum, R.A.	237
Olshevsky, G.	49
Ortea, J.	7
Ota, H.	155
Paris, M.G.	151, 154
Pekkarinen, A.	232
Pope, R.D.	339
Pucek, Z.	348

Randall, J.E. 323
Rasmont, P. 232
Revets, S.A. 98
Rice, D.W. 338
Ricqlès, A. de 51

Sabrosky, C.W. 258, 259, 312
Schodde, R. 253
Silfverberg, H. 17, 21
Skelley, P.E. 128
Smith, H.M. 52, 250, 330, 341
Smith, M.L. 47
Smith-Vaniz, W.F. 323
Sneath, P.H.A. 188
Spamer, E.E. 92
Springate, N.D. 230
Stebbins, R.C. 153
Stebnicka, Z. 121
Swann, J.E. 316

Théry, M. 52
Thomas, R.A. 154
Timm, T. 302
Tozer, E.T. 147
Trehane, R.P. 188
Tubbs, P.K. 51, 188

Valdés, A. 7
Voegtlin, D.J. 118
Voisin, C. 52
Voisin, J.-F. 52
Voss, R.S. 344

Wahlert, J.H. 344
Wake, D.B. 341
Wake, M.H. 237
Wallach, V. 250, 330
Watson, J.A.L. 14
Webb, M.D. 116
Webb, R.G. 151, 153
Welles, S.P. 48
Westcott, R.L. 44
Wheeler, T.A. 260, 316
Willan, R.C. 256
Williams, E.H. 224
Wilson, D.E. 343
Yalden, D.W. 267

Zwick, P. 309

NAMES AND WORKS PLACED ON OFFICIAL LISTS AND INDEXES IN RULINGS OF THE COMMISSION PUBLISHED IN VOLUME 51 (1994)

Names placed on on the Official Lists and Indexes in Volume 51, and amendments to names already so placed, are listed below under three headings: Family-Group Names, Generic Names and Specific Names. Entries on the Official Lists are in bold type and those on the Official Indexes in non-bold type. The title is given of one work deleted from the Official Index and placed on the Official List.

Family-Group Names

ANTHRIBIDAE Billberg, 1820 (Coleoptera) Op. 1756
CHORAGIDAE Kirby, 1819 (Coleoptera) Op. 1756
CRYPTINAE Kirby, 1837 (Hymenoptera) Op. 1757
METOPIAINI Townsend, 1908 (Diptera) Op. 1772
METOPIASINI Raffray, 1904 (Coleoptera) Op. 1772
METOPIINAE Foerster, [1869] (Hymenoptera) Op. 1772
METOPIINI Raffray, 1904 (Coleoptera) Op. 1772
METOPIINI Townsend, 1908 (Diptera) Op. 1772
SOMATODINAE Lacordaire, 1863 (Coleoptera) Op. 1770
SOMATODINI Schönherr, 1823 (Coleoptera) Op. 1770

Generic Names

Acamptopoeum Cockerell, 1905 (Hymenoptera) Op. 1759
Acineta Ehrenberg, [1834] (Ciliophora) Op. 1778
Acrochordium Meyen, 1834 (Hydrozoa) Op. 1752
Ahasverus des Gozis, 1881 (Coleoptera) Op. 1771
Allopeas Baker, 1935 (Gastropoda) Op. 1766
Altica Geoffroy, 1762 (Coleoptera) Op. 1754
Anthrenus Geoffroy, 1762 (Coleoptera) Op. 1754
Anthribus Geoffroy, 1762 (Coleoptera) Op. 1754
Ascopora Trautschold, 1876 (Bryozoa) Op. 1786
Asellus Geoffroy, 1762 (Crustacea) Op. 1754
Binoculus Geoffroy, 1762 (Crustacea) Op. 1754
Binoculus Geoffroy, 1764 (Crustacea) Op. 1754
Binoculus Müller, 1776 (Crustacea) Op. 1754
Bostrichus Geoffroy, 1762 (Coleoptera) Op. 1754
Buprestis Linnaeus, 1758 (Coleoptera) Op. 1784
Byrrhus Geoffroy, 1762 (Coleoptera) Op. 1754
Byrrhus Linnaeus, 1767 (Coleoptera) Op. 1754
Cerocoma Geoffroy, 1762 (Coleoptera) Op. 1754
Choragus Kirby, 1819 (Coleoptera) Op. 1756
Chrysobothris Eschscholtz, 1829 (Coleoptera) Op. 1784
Chrysobotris Eschscholtz, 1829 (Coleoptera) Op. 1784
Cistela Geoffroy, 1762 (Coleoptera) Op. 1754
Colubraria Schumacher, 1817 (Gastropoda) Op. 1765

Copris Geoffroy, 1762 (Coleoptera) Op. 1754
Crabro Geoffroy, 1762 (Hymenoptera) Op. 1754
Crioceris Geoffroy, 1762 (Coleoptera) Op. 1754
Cryptocephalus Geoffroy, 1762 (Coleoptera) Op. 1754
Cryptus Fabricius, 1804 (Hymenoptera) Op. 1757
Cryptus Jurine, 1801 (Hymenoptera) Op. 1757
Cryptus Panzer, 1804 (Hymenoptera) Op. 1757
Cucujus Fabricius, 1775 (Coleoptera) Op. 1754
Cucujus Geoffroy, 1762 (Coleoptera) Op. 1754
Diaperis Geoffroy, 1762 (Coleoptera) Op. 1754
Dicerca Eschscholtz, 1829 (Coleoptera) Op. 1784
Dicerea Eschscholtz, 1829 (Coleoptera) Op. 1784
Diplolepis Geoffroy, 1762 (Hymenoptera) Op. 1754
Dyticus Geoffroy, 1762 (Coleoptera) Op. 1754
Dyticus Müller, 1776 (Coleoptera) Op. 1754
Eulophus Geoffroy, 1762 (Hymenoptera) Op. 1754
Filimanus Myers, 1936 (Osteichthyes) Op. 1761
Forbicina Geoffroy, 1762 (Thysanura) Op. 1754
Formicaleo Geoffroy, 1762 (Neuroptera) Op. 1754
Fusinus Rafinesque, 1815 (Gastropoda) Op. 1765
Fusus Bruguière, 1789 (Gastropoda) Op. 1765
Fusus Helbling, 1779 (Gastropoda) Op. 1765
Fusus [Röding], 1798 (Gastropoda) Op. 1765
Galeruca Geoffroy, 1762 (Coleoptera) Op. 1754
Gyrinus Geoffroy, 1762 (Coleoptera) Op. 1754
Hepa Geoffroy, 1762 (Heteroptera) Op. 1754
Homalocephalus Jan, 1863 (Reptilia) Op. 1789
Hydrophilus Geoffroy, 1762 (Coleoptera) Op. 1754
Lagomeryx Roger, 1904 (Mammalia) Op. 1790
Mantes Geoffroy, 1762 (Orthoptera) Op. 1754
Mantis Linnaeus, 1758 (Orthoptera) Op. 1754
Mantis Linnaeus, 1767 (Orthoptera) Op. 1754
Megalophrys Wagler, 1830 (Amphibia, Anura) Op. 1763
Megophrys Kuhl & van Hasselt, 1822 (Amphibia, Anura) Op. 1763
Melolontha Fabricius, 1775 (Coleoptera) Op. 1754
Melolontha Geoffroy, 1762 (Coleoptera) Op. 1754
Metopia Meigen, 1803 (Diptera) Op. 1772
Metopias Gory, 1832 (Coleoptera) Op. 1772
Metopius Panzer, 1806 (Hymenoptera) Op. 1772
Mnestra Krohn, 1853 (Hydrozoa) Op. 1752
Nacaduba Moore, [1881] (Lepidoptera) Op. 1773
Notoxus Geoffroy, 1762 (Coleoptera) Op. 1754
Odontomus Kirby, 1837 (Coleoptera) Op. 1784
Omalisus Geoffroy, 1762 (Coleoptera) Op. 1754
Peltis Geoffroy, 1762 (Coleoptera) Op. 1754
Peltis Kugelann, 1792 (Coleoptera) Op. 1754
Pepliphorus Hübner, [1819] (Lepidoptera) Op. 1773

Peplodyta Toxopeus, 1929 (Lepidoptera) Op. 1773
Pistella Müller, 1764 (Coleoptera) Op. 1754
Platycerus Geoffroy, 1762 (Coleoptera) Op. 1754
Podisus Herrich-Schaeffer, 1851 (Heteroptera) Op. 1755
Potamolithus Pilsbry & Rush, 1896 (Gastropoda) Op. 1779
Prionus Geoffroy, 1762 (Coleoptera) Op. 1754
Procervulus Gaudry, 1877 (Mammalia) Op. 1791
Pseudoxyrhopus Günther, 1881 (Reptilia) Op. 1789
Pterophorus Geoffroy, 1762 (Lepidoptera) Op. 1754
Pterophorus Schäffer, 1766 (Lepidoptera) Op. 1754
Ptilinus Geoffroy, 1762 (Coleoptera) Op. 1754
Pyrochroa Geoffroy, 1762 (Coleoptera) Op. 1754
Rhinomacer Geoffroy, 1762 (Coleoptera) Op. 1754
Rhipidocystis Jaekel, 1901 (Eocrinoidea) Op. 1760
Scelidosaurus Owen, 1859 (Reptilia) Op. 1788
Somatodes Schönherr, 1823 (Coleoptera) Op. 1770
Somatodes Schönherr, 1840 (Coleoptera) Op. 1770
Stenocorus Geoffroy, 1762 (Coleoptera) Op. 1754
Styloptocuma Băcescu & Muradian, 1974 (Cumacea) Op. 1769
Taningia Joubin, 1931 (Cephalopoda) Op. 1768
Tetigonia Blanchard, 1852 (Homoptera) Op. 1754
Tetigonia Fourcroy, 1785 (Homoptera) Op. 1754
Tetigonia Geoffroy, 1762 (Homoptera) Op. 1754
Tinaea Geoffroy, 1762 (Lepidoptera) Op. 1754
Tokophrya Bütschli, 1889 (Ciliophora) Op. 1778
Tortaxis Pilsbry, 1906 (Gastropoda) Op. 1766
Tritoma Fabricius, 1775 (Coleoptera) Op. 1754
Tritoma Geoffroy, 1762 (Coleoptera) Op. 1754
Urocerus Geoffroy, 1762 (Hymenoptera) Op. 1754
Vipio Latreille, 1804 (Hymenoptera) Op. 1758
Volverella Bory de St Vincent, [1827] (Ciliophora) Op. 1778
Zanclea Gegenbaur, 1856 (Hydrozoa) Op. 1752

Specific Names

achatinaceus*, *Bulimus, Pfeiffer, 1846 (Gastropoda) Op. 1766
advena*, *Cryptophagus, Waltl, 1834 (Coleoptera) Op. 1771
aenea*, *Buprestis, Linnaeus, 1761 (Coleoptera) Op. 1784
africana*, *Gebia, Ortmann, 1894 (Crustacea, Decapoda) Op. 1753
albothorax*, *Banksinella luteolateralis, Theobald, 1907 (Diptera) Op. 1775
amasia, *Phalaena*, Smith, 1797 (Lepidoptera) Op. 1774
antipai*, *Styloptocuma, Băcescu & Muradian, 1974 (Cumacea) Op. 1769
aquaticus*, *Oniscus, Linnaeus, 1758 (Crustacea) Op. 1754
arcuata*, *Anas, Horsfield, 1824 (Aves) Op. 1764
argyrocephala*, *Tachina, Meigen, 1824 (Diptera) Op. 1772
asparagi*, *Chrysomela, Linnaeus, 1758 (Coleoptera) Op. 1754
astoma, *Volverella*, Bory de St Vincent, [1827] (Ciliophora) Op. 1778

baltica*, *Rhipidocystis, Jaekel, 1901 (Eocrinoidea) Op. 1760
biguttatus, *Dytiscus*, Gmelin, 1790 (Coleoptera) Op. 1785
biguttatus*, *Dytiscus, Olivier, 1795 (Coleoptera) Op. 1785
bipustulata*, *Tritoma, Fabricius, 1775 (Coleoptera) Op. 1754
boleti*, *Chrysomela, Linnaeus, 1758 (Coleoptera) Op. 1754
brasiliensis, *Mugil*, Spix *in* Spix & Agassiz, 1831 (Osteichthyes) Op. 1787
brunneus, *Lyctus*, Fabricius, 1792 (Coleoptera) Op. 1771
brunneus*, *Xylotrogus, Stephens, 1830 (Coleoptera) Op. 1771
capensis*, *Gebia major, Krauss, 1843 (Crustacea, Decapoda) Op. 1753
capucinus*, *Dermestes, Linnaeus, 1758 (Coleoptera) Op. 1754
caraboides*, *Scarabaeus, Linnaeus, 1758 (Coleoptera) Op. 1754
caucasicus*, *Aradus, Kolenati, 1857 (Heteroptera) Op. 1783
chrysostigma*, *Buprestis, Linnaeus, 1758 (Coleoptera) Op. 1784
cinnabarina*, *Meloe, Scopoli, 1763 (Coleoptera) Op. 1754
circumluteola*, *Banksinella luteolateralis, Theobald, 1908 (Diptera) Op. 1775
coccinea*, *Cantharis, Linnaeus, 1761 (Coleoptera) Op. 1754
colus*, *Murex, Linnaeus, 1758 (Gastropoda) Op. 1765
connubialis*, *Catocala, Guenée, 1852 (Lepidoptera) Op. 1774
coriarius*, *Cerambyx, Linnaeus, 1758 (Coleoptera) Op. 1754
costata*, *Zanclea, Gegenbaur, 1856 (Hydrozoa) Op. 1752
curculionoides*, *Metopias, Gory, 1832 (Coleoptera) Op. 1772
curema*, *Mugil, Valenciennes *in* Cuvier & Valenciennes, 1836 (Osteichthyes) Op. 1787
cyanea*, *Papilio, Cramer, [1775] (Lepidoptera) Op. 1773
cylindricus, *Ptilinus*, Müller, 1776 (Coleoptera) Op. 1754
danae*, *Taningia, Joubin, 1931 (Cephalopoda) Op. 1768
dichotoma*, *Antilope, Gervais, 1849 (Mammalia) Op. 1791
erecta*, *Achatina, Benson, 1842 (Gastropoda) Op. 1766
fasciatus*, *Anthribus, Forster, 1770 (Coleoptera) Op. 1754
fitzingeri, *Laemanctus*, Wiegmann, 1834 (Reptilia) Op. 1777
fluminensis, *Cynopoecilus*, Faria & Muller, 1937 (Osteichthyes) Op. 1762
fontisbellaquaei*, *Omalisus, Geoffroy *in* Fourcroy, 1785 (Coleoptera) Op. 1754
forskahli, *Pleurobranchus*, Delle Chiaje, 1822 (Gastropoda) Op. 1767
forskalii*, *Pleurobranchus, Rüppell & Leuckart, [1828] (Gastropoda) Op. 1767
fuscus*, *Ptilinus, Geoffroy *in* Fourcroy, 1785 (Coleoptera) Op. 1754
gaimardianus, *Mugil*, Desmarest, 1831 (Osteichthyes) Op. 1787
gigas*, *Ichneumon, Linnaeus, 1758 (Hymenoptera) Op. 1754
gracilis*, *Bulimus, Hutton, 1834 (Gastropoda) Op. 1766
granulata*, *Colubraria, Schumacher, 1817 (Gastropoda) Op. 1765
grilli*, *Anisolepis, Boulenger, 1891 (Reptilia) Op. 1777
grossa*, *Silpha, Linnaeus, 1758 (Coleoptera) Op. 1754
harrisonii*, *Scelidosaurus, Owen, 1861 (Reptilia) Op. 1788
heterurus*, *Homalocephalus, Jan, 1863 (Reptilia) Op. 1789
hieroglyphicus*, *Aradus, Sahlberg, 1878 (Heteroptera) Op. 1783
intermedia, *Eulima*, Cantraine, 1835 (Gastropoda) Op. 1780
javanica*, *Anas, Horsfield, 1821 (Aves) Op. 1764
lacteus*, *Termes, Froggatt, 1898 (Isoptera) Op. 1781
lactis, *Termes*, Froggatt, 1897 (Isoptera) Op. 1781

lapidum*, *Paludina, d'Orbigny, 1835 (Gastropoda) Op. 1779
liza*, *Mugil, Valenciennes *in* Cuvier & Valenciennes, 1836 (Osteichthyes) Op. 1787
longicauda*, *Agathis, Boheman, 1853 (Hymenoptera) Op. 1758
lunaris*, *Scarabaeus, Linnaeus, 1758 (Coleoptera) Op. 1754
***mcintoshi*, *Aedes* (*Neomelaniconion*)**, Huang, 1985 (Diptera) Op. 1775
megapoda*, *Rana, Taylor, 1942 (Amphibia, Anura) Op. 1776
melolontha*, *Scarabaeus, Linnaeus, 1758 (Coleoptera) Op. 1754
meridiana*, *Leptura, Linnaeus, 1758 (Coleoptera) Op. 1754
minuta, *Notonecta*, Gmelin, 1790 (Heteroptera) Op. 1782
minutior, *Notonecta*, Sulzer, 1776 (Heteroptera) Op. 1782
misumenus*, *Somatodes, Gyllenhal *in* Schönherr, 1840 (Coleoptera) Op. 1770
monoceros*, *Attelabus, Linnaeus, 1761 (Coleoptera) Op. 1754
montana*, *Megophrys, Kuhl & van Hasselt, 1822 (Amphibia, Anura) Op. 1763
monticola, *Megophrys*, Kuhl & van Hasselt, 1822 (Amphibia, Anura) Op. 1763
monticola, *Xenophrys*, Günther, 1864 (Amphibia, Anura) Op. 1763
natator*, *Dytiscus, Linnaeus, 1758 (Coleoptera) Op. 1754
nigrolineata*, *Corisa, Fieber, 1848 (Heteroptera) Op. 1782
nodosa*, *Ceriopora, Fischer von Waldheim, 1837 (Bryozoa) Op. 1786
obtusirostris, *Laemanctus*, Wiegmann, 1834 (Reptilia) Op. 1777
octoguttata*, *Buprestis, Linnaeus, 1758 (Coleoptera) Op. 1784
oleracea*, *Chrysomela, Linnaeus, 1758 (Coleoptera) Op. 1754
olivieri, *Agabus*, Zaitzev, 1908 (Coleoptera) Op. 1785
opalescens*, *Cynolebias, Myers, 1942 (Osteichthyes) Op. 1762
pallida, *Banksinella luteolateralis*, Theobald, 1907 (Diptera) Op. 1775
parasites, *Mnestra*, Krohn, 1853 (Hydrozoa) Op. 1752
parvum*, *Leptobrachium, Boulenger, 1893 (Amphibia, Anura) Op. 1763
pentadactyla*, *Phalaena, Linnaeus, 1758 (Lepidoptera) Op. 1754
perplexa*, *Filimanus, Feltes, 1991 (Osteichthyes) Op. 1761
persica*, *Octopodoteuthis, Naef, 1923 (Cephalopoda) Op. 1768
piceus*, *Dytiscus, Linnaeus, 1758 (Coleoptera) Op. 1754
pilula*, *Dermestes, Linnaeus, 1758 (Coleoptera) Op. 1754
politus*, *Turbo, Linnaeus, 1758 (Gastropoda) Op. 1780
prominens*, *Lampides, Moore, 1877 (Lepidoptera) Op. 1773
quadripartita*, *Podophrya, Claparède & Lachmann, 1859 (Ciliophora) Op. 1778
ramicornis*, *Ichneumon, Fabricius, 1781 (Hymenoptera) Op. 1754
religiosus*, *Gryllus, Linnaeus, 1758 (Orthoptera) Op. 1754
rosae*, *Cynips, Linnaeus, 1758 (Hymenoptera) Op. 1754
ruetimeyeri*, *Lagomeryx, Thenius, 1948 (Mammalia) Op. 1790
sanctus, *Somatodes*, Schönherr, 1823 (Coleoptera) Op. 1770
sandrii, *Cynopoecilus*, Faria & Muller, 1937 (Osteichthyes) Op. 1762
schaefferi*, *Meloe, Linnaeus, 1758 (Coleoptera) Op. 1754
scrophulariae*, *Dermestes, Linnaeus, 1758 (Coleoptera) Op. 1754
sericea*, *Chrysomela, Linnaeus, 1758 (Coleoptera) Op. 1754
sheppardi*, *Choragus, Kirby, 1819 (Coleoptera) Op. 1756
sinuosa, *Rissoa*, Scacchi, 1836 (Gastropoda) Op. 1780
splendens*, *Cynolebias, Myers, 1942 (Osteichthyes) Op. 1762
submetallicum*, *Camptopoeum, Spinola, 1851 (Hymenoptera) Op. 1759

tanaceti*, *Chrysomela, Linnaeus, 1758 (Coleoptera) Op. 1754
testudinarius*, *Pleurobranchus, Cantraine, 1835 (Gastropoda) Op. 1767
trilobata, *Rana*, Mocquard, 1899 (Amphibia, Anura) Op. 1776
tuberosa*, *Acineta, Ehrenberg, [1834] (Ciliophora) Op. 1778
tuberosa, *Vorticella*, Müller, 1786 (Ciliophora) Op. 1778
tuberosus, *Brachionus*, Pallas, 1766 (Ciliophora) Op. 1778
vespoides*, *Sphex, Scopoli, 1763 (Hymenoptera) Op. 1772
vittipennis*, *Podisus, Herrich-Schaeffer, 1851 (Heteroptera) Op. 1755

Work deleted from the Official Index of Rejected and Invalid Works and placed on the Official List of Available Works

Geoffroy, E.L. 1762. *Histoire abrégée des insectes qui se trouvent aux environs de Paris*. Op. 1754

KEY NAMES AND WORKS IN APPLICATIONS AND COMMENTS PUBLISHED IN VOLUME 51 (1994)

(for names in Rulings of the Commission see pages 351–356)

Page

Acanthoteuthis Wagner *in* Münster, 1839 (Cephalopoda) . . . 219
Acrostomum Örsted, 1843 (Nemertea) . . . 298
acutangula, Limosina, Zetterstedt, 1847 (Diptera) . . . 316
adscensionis, Scomber, Osbeck, 1771 (Osteichthyes) . . . 323
Agouti Lacepède, 1799 (Mammalia) . . . 135, 266, 342
Akrostomum Grube, 1840 (Nemertea) . . . 298
Alestes Müller & Troschel, 1844 (Osteichthyes) . . . 35
alternans, Coluber, Lichtenstein, 1823 (Reptilia) . . . 250
Apolybas Alvarenga, 1965 (Coleoptera) . . . 128
arceuthophila, Helix, Mabille, 1881 (Gastropoda) . . . 105, 336
arquata, Kelaeno, Münster, 1842 (Cephalopoda) . . . 219
ascensionis, Caranx, Cuvier *in* Cuvier & Valenciennes, 1833 (Osteichthyes) . . . 323
asellus, Oniscus, Linnaeus, 1758 (Isopoda) . . . 227

banksii, Psittacus, Latham, 1790 (Aves) . . . 253
bauri, Coelophysis, (Cope, 1887) (Reptilia) . . . 48, 156, 265
Bhatia Distant, 1908 (Homoptera) . . . 116
bipustulatus, Lyctus, Fabricius, 1792 (Coleoptera) . . . 21, 256
Bohemilla Vejdovský, 1883 (Oligochaeta) . . . 302
Bohemillula Strand, 1928 (Oligochaeta) . . . 302
Borborus Meigen, 1803 (Diptera) . . . 312
Borophaga Enderlein, 1924 (Diptera) . . . 312
Brachyptera Newport, 1848 (Plecoptera) . . . 309
BRACHYPTERAINAE Zwick, 1973 (Plecoptera) . . . 309
BRACHYPTERINAE Erichson, 1845 (Coleoptera) . . . 309
BRACHYPTERINAE Zwick, 1973 (Plecoptera) . . . 309
Brachypterus Kugelann, 1794 (Coleoptera) . . . 309
browniana, Cypris, Jones, 1850 (Ostracoda) . . . 304
buccata, Conops, Linnaeus, 1758 (Diptera) . . . 31, 259

CACOSTERNINAE Noble, 1931 (Amphibia, Anura) . . . 240
Cacosternum Boulenger, 1887 (Amphibia, Anura) . . . 240
CAECILIIDAE Kolbe, 1880 (Psocoptera) . . . 237
CAECILIIDAE Rafinesque-Schmaltz, 1814 (Amphibia, Gymnophiona) . . . 237
CAECILIUSIDAE Kolbe, 1880 (Psocoptera) . . . 237
caedemadens, Cassida, Lichtenstein, 1796 (Coleoptera) . . . 108, 339
calcaratus, Hemimantis, Peters, 1863 (Amphibia, Anura) . . . 240
camelopardalis, Cervus, Linnaeus, 1758 (Mammalia) . . . 135, 266, 342
cameronensis, Petropedetes, Reichenow, 1874 (Amphibia, Anura) . . . 240
caperans, Brachycerus, Lichtenstein, 1796 (Coleoptera) . . . 108, 339
Cassidella Hofker, 1953 (Foraminiferida) . . . 98
CECILINIA Rafinesque-Schmaltz, 1814 (Amphibia, Gymnophiona) . . . 237
Celaeno Owen, 1844 (Cephalopoda) . . . 219
cellaris, Dermestes, Scopoli, 1763 (Coleoptera) . . . 21, 256
cephalotes, Tenthredo, Fabricius, 1781 (Hymenoptera) . . . 230
Cerylon Latreille, 1802 (Coleoptera) . . . 17

CERYLONIDAE Billberg, 1820 (Coleoptera) 17
chelicornis, Solpuga, Lichtenstein, 1796 (Arachnida) 108
Chromadora Bastian, 1865 (Nematoda) 102
chrysis, Lygaeus, Lichtenstein, 1796 (Heteroptera) 108
chrysothorax, Vespa, Lichtenstein, 1796 (Hymenoptera) 108
Clavella Oken, 1815 (Copepoda) 338
clavicornis, Dermestes, Linnaeus, 1758 (Coleoptera) 17
clymenoides, Johnstonia, Quatrefages, [1866] (Polychaeta) 10
Coenomyia Latreille, 1796 (Diptera) 31, 259
colberti, Rioarribasaurus, Hunt & Lucas, 1991 (Reptilia) 48, 156, 265
coleoptrata, Sigara, Fabricius, [1777] (Heteroptera) 41
coloboptera, Vespa, Lichtenstein, 1796 (Hymenoptera) 108
Colon Herbst, 1797 (Coleoptera) 21, 256
COLYDIIDAE Erichson, 1842 (Coleoptera) 17
Colydium Fabricius, 1792 (Coleoptera) 17
comata, Bohemilla, Vejdovský, 1883 (Oligochaeta) 302
conica, Anthomyia, Wiedemann, 1817 (Diptera) 28, 258
Coproica Rondani, 1861 (Diptera) 316
Coptorhinus Dejean, 1833 (Coleoptera) 306
Coptorhinus Guérin Méneville, [1838] (Coleoptera) 306
Cryptophagus Herbst, 1792 (Coleoptera) 21
cucullatus, Megalodon, Sowerby, 1827 (Bivalvia) 230
Cuniculus Brisson, 1762 (Mammalia) 135, 266, 342
Cuniculus Meyer, 1790 (Mammalia) 135, 266, 342
Cuniculus Wagler, 1830 (Mammalia) 135, 266, 342
curvipes, Sphaerocera, Latreille, 1805 (Diptera) 312
Cylindrogaster Lioy, 1864 (Diptera) 31, 259

darwiniensis, Mastotermes, Froggatt, 1897 (Isoptera) 14
deana, Helix, Berthier, 1884 (Gastropoda) 105, 336
dentex, Cyprinus, Linnaeus, 1758 (Osteichthyes) 35
dentex, Scomber, Bloch & Schneider, 1801 (Osteichthyes) 323
denticulatus, Borborus, Meigen, 1830 (Diptera) 316
Dorcatoma Herbst, 1792 (Coleoptera) 21, 256
Dorkatoma Herbst, 1792 (Coleoptera) 21, 256
dresdensis, Dorcatoma, Herbst, 1792 (Coleoptera) 21, 256

ELMIDAE Curtis, 1830 (Coleoptera) 25, 257
Elmis Latreille, 1802 (Coleoptera) 25, 257
elongatus, Bostrichus, Fabricius, 1787 (Coleoptera) 17
Emys Duméril, 1806 (Reptilia) 52
ephippium, Cassida, Lichtenstein, 1796 (Coleoptera) 108, 339
ephippium, Reduvius, Lichtenstein, 1796 (Heteroptera) 108
Eretmosaurus Seeley, 1874 (Reptilia) 247
Euchromadora de Man, 1886 (Nematoda) 102
Euhyaena Falconer, 1868 (Mammalia) 135, 266, 342

fatalis, Solpuga, Lichtenstein, 1796 (Arachnida) 108
ferruginea, Conops, Linnaeus, 1761 (Diptera) 31, 259
ferruginea, Musca, Scopoli, 1763 (Diptera) 31, 259
filum, Mantis, Lichtenstein, 1796 (Mantodea) 108
flavicollo, Psittacus banksi, Kerr, 1792 (Aves) 253

flavimana, Phora, Meigen, 1830 (Diptera) 312
foetidus, Scarabaeus, Herbst, 1783 (Coleoptera) 121, 340
forsteri, Natrix, Wagler *in* Spix, 1824 (Reptilia) 250
Fursenkoina Loeblich & Tappan, 1961 (Foraminiferida) 98

genei, Salamandra, Temminck & Schlegel, 1838 (Amphibia, Caudata) 149
geyeri, Xerophila, Soós, 1926 (Gastropoda) 105, 336
Giraffa Brisson, 1762 (Mammalia) 135, 266, 342
glaucus, Scomber, Linnaeus, 1758 (Osteichthyes) 323
Glis Brisson, 1762 (Mammalia) 135, 266, 342
glis, Sciurus, Linnaeus, 1766 (Mammalia) 135, 266, 342
gnatho, Brentus, Lichtenstein, 1796 (Coleoptera) 108, 339
gracilis, Loris, E. Geoffroy Saint-Hilaire, 1796 (Mammalia) 135, 266, 332, 342
grandiflora, Doris, Rapp, 1827 (Gastropoda) 7, 256
guttata, Doridopsis, Odhner, 1917 (Gastropoda) 7, 256
guttata, Doris, Risso, 1826 (Gastropoda) 7, 256

haematites, Cassida, Lichtenstein, 1796 (Coleoptera) 108, 339
hamiltoni, Catharacta skua, Hagen, 1952 (Aves) 52
hasselquistii, Myletes, Cuvier, 1818 (Osteichthyes) 35
HEMIDACTYLIINI Hallowell, 1856 (Amphibia, Caudata) 153, 264, 341
HEMIMANTIDAE Hoffmann, 1878 (Amphibia, Anura) 240
Hemimantis Peters, 1863 (Amphibia, Anura) 240
Heteroptera Macquart, 1835 (Diptera) 316
histeroides, Lyctus, Fabricius, 1792 (Coleoptera) 17
hoevenii, Bagrus, Bleeker, 1846 (Osteichthyes) 320
humilis, Bombus, Illiger, 1806 (Hymenoptera) 232
Hyaena Brisson, 1762 (Mammalia) 135, 266, 342
hyaena, Canis, Linnaeus, 1758 (Mammalia) 135, 266, 342
hydrochaeris, Sus, Linnaeus, 1766 (Mammalia) 135, 266, 342
Hydrochoerus Brisson, 176 (Mammalia) 135, 266, 342
Hydromantes Gistel, 1848 (Amphibia, Caudata) 149
Hydrophoria Robineau-Desvoidy, 1830 (Diptera) 28, 258

intermedia, Macrochaeta, Bretscher, 1896 (Oligochaeta) 302
Ischiolepta Lioy, 1864 (Diptera) 316
Ischyrus Dejean, 1836 (Coleoptera) 128
Ischyrus Lacordaire, 1842 (Coleoptera) 128

javanicus, Cervus, Osbeck, 1765 (Mammalia) 135, 266, 342
Johnstonia Basir, 1956 (Polychaeta) 10
Johnstonia Fuhrmann, 1920 (Polychaeta) 10
Johnstonia Quatrefages, 1849 (Polychaeta) 10
Johnstonia Quatrefages, 1866 (Polychaeta) 10
junix, Brachycerus, Lichtenstein, 1796 (Coleoptera) 108, 339

Kalaeno Krimholz, 1958 (Cephalopoda) 219
Kelaeno d'Orbigny, 1841 (Cephalopoda) 219
Kelaeno Münster, 1839 (Cephalopoda) 219
Kelaeno Münster, 1842 (Cephalopoda) 219
Kolon Herbst, 1797 (Coleoptera) 21, 256
Kryptophagus Herbst, 1792 (Coleoptera) 21, 256

lancifer, *Musca*, Harris, [1780] (Diptera) 28, 258
lathami, *Psittacus*, Temminck, 1807 (Aves) 253
lesueuri, *Erotylus*, Chevrolat, 1835 (Coleoptera) 128
Lironeca Leach, 1818 (Isopoda) 224
LIRONECINAE Schioedte & Meinert, 1884 (Isopoda) 224
Livoneca Leach, 1818 (Isopoda) 224
LIVONECINAE Schioedte & Meinert, 1884 (Isopoda) 224
lonnbergi, *Catharacta antarctica*, Mathews, 1912 (Aves) 52
Loridium Rafinesque, 1815 (Mammalia) 135, 266, 332, 342
Loris E. Geoffroy Saint-Hilaire, 1796 (Mammalia) 135, 266, 332, 342
lucorum, *Apis*, Linnaeus, 1761 (Hymenoptera) 232
lugubris, *Caranx*, Poey, [1860] (Osteichthyes) 323
Lutra Brisson, 1762 (Mammalia) 135, 266, 342
lutra, *Mustela*, Linnaeus, 1758 (Mammalia) 135, 266, 342
Lybas Dejean, 1836 (Coleoptera) 128
Lybas Lacordaire, 1842 (Coleoptera) 128
Lycognathophis Boulenger, 1893 (Reptilia) 330

Macrochaeta Bretscher, 1896 (Oligochaeta) 302
Macrochaetina Bretscher, 1899 (Oligochaeta) 302
magnificus, *Psittacus*, Shaw *in* Shaw & Nodder, 1790 (Aves) 253
marginata, *Notonecta*, Müller, 1776 (Heteroptera) 41
marmoratus, *Rivulus*, Poey, 1880 (Osteichthyes) 46
maugetii, *Elmis*, Latreille, 1802 (Coleoptera) 25, 257
Megalodon Sowerby, 1827 (Bivalvia) 230
Megalodontes Latreille, 1802 (Hymenoptera) 230
MEGALODONTESIDAE Konow, 1897 (Hymenoptera) 230
MEGALODONTIDAE Konow, 1897 (Hymenoptera) 230
MEGALODONTIDAE Morris & Lycett, 1853 (Bivalvia) 230
Megischyrus Crotch, 1873 (Coleoptera) 128
Melanophila Eschscholtz, 1829 (Coleoptera) 43
Meles Brisson, 1762 (Mammalia) 135, 266, 342
meles, *Ursus*, Linnaeus, 1758 (Mammalia) 135, 266, 342
Melesium Rafinesque, 1815 (Mammalia) 135, 266, 342
meridionalis, *Termes*, Froggatt, 1898 (Isoptera) 14
Micrischyrus Alvarenga, 1965 (Coleoptera) 128
m-nigrum, *Coluber*, Raddi, 1820 (Reptilia) 250
monardae, *Rhopalosiphum*, Davis, 1911 (Homoptera) 118
muscorum, *Apis*, Linnaeus, 1758 (Hymenoptera) 232
MYCETOGLOSSINI Bonaparte, 1850 (Amphibia, Caudata) 153, 264, 341
Mycotretus Dejean, 1836 (Coleoptera) 128
Mycotretus Lacordaire, 1842 (Coleoptera) 128
Myletes Cuvier, 1814 (Osteichthyes) 35
Myopa Fabricius, 1775 (Diptera) 31, 259
Myopella Robineau-Desvoidy, 1853 (Diptera) 31, 259
Myoxus Zimmermann, 1780 (Mammalia) 135, 266, 342

nanum, *Cacosternum*, Boulenger, 1887 (Amphibia, Anura) 240
natalensis, *Stenorhynchus*, Smith, 1849 (Amphibia, Anura) 240
neriifolia, *Locusta*, Lichtenstein, 1796 (Orthoptera) 108
Nesopupa Pilsbry, 1900 (Gastropoda) 217
niger, *Vespertilio vampirus*, Kerr, 1792 (Mammalia) 135, 266, 342

nitida, Cicindela, Lichtenstein, 1796 (Coleoptera) 108, 339
nodosus, Ceratites, Schlotheim, 1813 (Cephalopoda) 41, 147
normalis, Lybas, Lacordaire, 1842 (Coleoptera) 128
nudicapitata, Chromadora, Bastian, 1865 (Nematoda) 102

obliqua, Notonecta, Thunberg, 1787 (Heteroptera) 41
ocellatus, Rivulus, Hensel, 1868 (Osteichthyes) 46
olivaceus, Eutettix?, Melichar, 1903 (Homoptera) 116
Oniscus Linnaeus, 1758 (Isopoda) 227
opossum, Didelphis, Linnaeus, 1758 (Mammalia) 135, 266, 342
ORTHOCERINI Blanchard, 1845 (1820) (Coleoptera) 17
Orthocerus Latreille, 1796 (Coleoptera) 17
ovatus, Gasterosteus, Linnaeus, 1758 (Osteichthyes) 323

paca, Mus, Linnaeus, 1766 (Mammalia) 135, 266, 342
Pennella Oken, 1815 (Copepoda) 338
Petropedetes Reichenow, 1874 (Amphibia, Anura) 240
PETROPEDETINAE Noble, 1931 (Amphibia, Anura) 240
Phaenops Dejean, 1833 (Coleoptera) 43
Philander Brisson, 1762 (Mammalia) 135, 266, 342
PHRYNOBATRACHINAE Laurent, 1941 (Amphibia, Anura) 240
Phrynobatrachus Günther, 1862 (Amphibia, Anura) 240
piceus, Lithobius, Koch, 1862 (Chilopoda) 133, 341
pleurestha, Helix, Berthier, 1884 (Gastropoda) 105, 336
poecilogyrus, Coluber, Wied-Neuwied, [1824] (Reptilia) 250
Poecilonota Eschscholtz, 1829 (Coleoptera) 43
Porcellio Latreille, 1804 (Isopoda) 227
portentosa, Acheta, Lichtenstein, 1796 (Orthoptera) 108
pseudobrowniana, Scottia, Kempf, 1971 (Ostracoda) 304
Pseudocaranx Bleeker, 1863 (Osteichthyes) 323
Pteropus Brisson, 1762 (Mammalia) 135, 266, 342
Ptychochilus Boettger, 1881 (Gastropoda) 217
Ptychochylus Boettger, 1881 (Gastropoda) 217
purpurea, Sagra, Lichtenstein, 1796 (Coleoptera) 108, 339
pusilla, Copromyza, Fallén, 1820 (Diptera) 316

quadridentatus, Lithobius, Menge, 1851 (Chilopoda) 133, 341
quadripunctatus, Erotylus, Olivier, 1792 (Coleoptera) 128

redmanii, Livoneca, Leach, 1818 (Isopoda) 224
retusus, Scarabaeus, Fabricius, 1781 (Coleoptera) 306
Rhizophagus Herbst, 1793 (Coleoptera) 21, 256
Rhyzophagus Gyllenhal, 1813 (Coleoptera) 21, 256
rufus, Scarabaeus, De Geer, 1778 (Coleoptera) 121, 340
rufus, Scarabaeus, Fabricius, 1792 (Coleoptera) 121, 340
rufus, Scarabaeus, Moll, 1782 (Coleoptera) 121, 340
rugosus, Plesiosaurus, Owen, 1840 (Reptilia) 247
Ryzophagus Herbst, 1793 (Coleoptera) 21, 256

SARROTRIIDAE Billberg, 1820 (Coleoptera) 17
scaber, Porcellio, Latreille, 1804 (Isopoda) 227
Scintillatrix Obenberger, 1956 (Coleoptera) 43
Scopelophis Fitzinger, 1843 (Reptilia) 330
Scottia Brady & Norman, 1889 (Ostracoda) 304

scrophulariae, *Phorodon*, Thomas, 1879 (Homoptera) 118
scybalarius, *Scarabaeus*, Fabricius, 1781 (Coleoptera) 121, 340
seychellensis, *Psammophis*, Schlegel, 1837 (Reptilia) 330
Sicus Fabricius, 1798 (Diptera) 31, 259
Sicus Latreille, 1796 (Diptera) 31, 259
Sicus Scopoli, 1763 (Diptera) 31, 259
Solpuga Lichtenstein, 1796 (Arachnida) 108
speciosa, *Acanthoteuthis*, Münster, 1839 (Cephalopoda) 219
Sphaerocera Latreille, 1804 (Diptera) 312
squammosa, *Virgulina*, d'Orbigny, 1826 (Foraminiferida) 98
stannii, *Akrostomum*, Grube, 1840 (Nemertea) 298
Stenops Illiger, 1811 (Mammalia) 135, 266, 332, 342
Stomoxoides Schaeffer, 1766 (Diptera) 31, 259
subsultans, *Musca*, Linnaeus, 1767 (Diptera) 312

tantilla, *Pupa*, Gould, 1847 (Gastropoda) 217
Tapirus Brisson, 1762 (Mammalia) 135, 266, 342
Tardigradus Boddaert, 1785 (Mammalia) 135, 266, 332, 342
Tardigradus Brisson, 1762 (Mammalia) 135, 266, 332, 342
tardigradus, *Lemur*, Linnaeus, 1758 (Mammalia) 135, 266, 332, 342
Taxus Cuvier & Geoffroy Saint-Hilaire, 1795 (Mammalia) 135, 266, 342
tegulata, *Virgulina*, Reuss, 1846 (Foraminiferida) 98
Temnorhynchus Hope, 1837 (Coleoptera) 306
terrestris, *Apis*, Linnaeus, 1758 (Hymenoptera) 232
terrestris, *Hippopotamus*, Linnaeus, 1758 (Mammalia) 135, 266, 342
topeka, *Cliola* (*Hybopsis*), Gilbert, 1884 (Osteichthyes) 262
Tragulus Boddaert, 1785 (Mammalia) 135, 266, 342
Tragulus Brisson, 1762 (Mammalia) 135, 266, 342
Tragulus Pallas, 1767 (Mammalia) 135, 266, 342
trifasciata, *Nemoura*, Pictet, 1832 (Plecoptera) 309
tristis, *Moniana*, Girard, 1857 (Gastropoda) 262

umbretta, *Phasma*, Lichtenstein, 1796 (Phasmida) 108
undatus, *Erotylus*, Olivier, 1792 (Coleoptera) 128
urticae, *Dermestes*, Fabricius, 1792 (Coleoptera) 309

Valdivianemertes Stiasny-Wijnhoff, 1923 (Nemertea) 298
Vejdovskyella Michaelsen, 1903 (Oligochaeta) 302
vicianica, *Helix*, Bourguignat *in* Locard, 1882 (Gastropoda) 105, 336
viennensis, *Colon*, Herbst, 1797 (Coleoptera) 21, 256
v-luteum, *Cimex*, Lichtenstein, 1796 (Heteroptera) 108
vulgaris, *Chromadora*, Bastian, 1865 (Nematoda) 102

ycaunica, *Helix*, Mabille, 1881 (Gastropoda) 105, 336

Brisson, M.J. 1762. *Regnum Animale in classes IX distributum, sive synopsis methodica* 135, 266, 342
Lichtenstein, A.A.H. 1796. *Catalogus musei zoologici ditissimi Hamburgi, d. III. Februar 1796 auctionis lege distrahendi. Sectio Tertia. Continens Insecta* 108, 339
Lichtenstein, A.A.H. 1797. *Catalogus musei zoologici ditissimi Hamburgi, d. 16 Majus 1797 auctionis lege distrahendi. Sectio Tertia. Continens Insecta* 108
Schneider, D.H. 1800. *Verzeichniss einer Parthei Insekten welche am 6ten März 1800 zu Stralsund in öffentlicher Auction einzeln verkauft werden sollen* 108

INFORMATION AND INSTRUCTIONS FOR AUTHORS

The following notes are primarily for those preparing applications; other authors should comply with the relevant sections. Applications should be prepared in the format of recent parts of the Bulletin; manuscripts not prepared in accordance with these guidelines may be returned.

General. Applications are requests to the Commission to set aside or modify the Code's provisions as they relate to a particular name or group of names when this appears to be in the interest of stability of nomenclature. Authors submitting cases should regard themselves as acting on behalf of the zoological community and the Commission will treat applications on this basis. Applicants are advised to discuss their cases with other workers in the same field before submitting applications, so that they are aware of any wider implications and the likely reactions of other zoologists.

Text. Typed in double spacing, this should consist of numbered paragraphs setting out the details of the case and leading to a final paragraph of formal proposals. Text references should give dates and page numbers in parentheses, e.g. 'Daudin (1800, p. 39) described . . .'. The Abstract will be prepared by the Secretariat.

References. These should be given for all authors cited. Where possible, ten or more relatively recent references should be given illustrating the usage of names which are to be conserved or given precedence over older names. The title of periodicals should be in full and be underlined; numbers of volumes, parts, etc. should be in arabic figures, separated by a colon from page numbers. Book titles should be underlined and followed by the number of pages and plates, the publisher and place of publication.

Submission of Application. Two copies should be sent to: The Executive Secretary, The International Commission on Zoological Nomenclature, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. It would help to reduce the time that it takes to process the large number of applications received if the typescript could be accompanied by a disk with copy in IBM PC compatible format, preferably in ASCII text. It would also be helpful if applications were accompanied by photocopies of relevant pages of the main references where this is possible.

The Commission's Secretariat is very willing to advise on all aspects of the formulation of an application.

PUBLICATION DATES AND PAGINATION OF VOLUME 51 (1994)

Part No.	*Pages in Part*	*Date of publication*
1	1–88	30 March 1994
2	89–184	30 June 1994
3	185–292	30 September 1994
4	293–364	20 December 1994

INSTRUCTIONS TO BINDER

The present volume should be bound up as follows:
Title page, Table of Contents (I–VII), 1–364
Note: the covers of the four parts should be bound with the volume

On the proposed suppression of the catalogues of A.A.H. Lichtenstein (1796, 1797) and D.H. Schneider (1800), with the conservation of some Lichtenstein (1796) names (Insecta and Arachnida). R.D. Pope 339
On the proposed conservation of the specific names of *Aphodius rufus* (Moll, 1782), *A. foetidus* (Herbst, 1783) and *Aegialia rufa* (Fabricius, 1792) (Insecta, Coleoptera). G. Dellacasa. 340
On the proposed conservation of the specific name of *Lithobius piceus* L. Koch, 1862 (Chilopoda). A. Minelli 341
On the proposed conservation of HEMIDACTYLIINI Hallowell, 1856 (Amphibia, Caudata). H.M. Smith & D.B. Wake 341
On the proposed conservation of some mammal generic names first published in Brisson's (1762) *Regnum Animale*. C.P. Groves; D.E. Wilson; R.S. Voss; J.H. Wahlert; P.A. Morris; S. Anderson; P. Grubb; D.L. Harrison & P.J.J. Bates; Z. Pucek 342

Indexes, etc.

Authors in volume 51 (1994) 349
Names and works placed on Official Lists and Indexes in rulings of the Commission published in volume 51 (1994) 351
Key names and works in Applications and Comments published in volume 51 (1994). 357
Instructions to authors 363
Publication dates and pagination of volume 51 (1994) 364
Instructions to binder 364
Table of Contents of volume 51 (1994) I

CONTENTS

Page

Notices 293
Fourth Edition of the International Code of Zoological Nomenclature 294
The International Code of Zoological Nomenclature 294
Official Lists and Indexes of Names and Works in Zoology — Second Supplement to 1990 294
Bulletin of Zoological Nomenclature — Back Copies 295
Bulletin of Zoological Nomenclature — Crustacea and Mollusca Offprints 295
The European Association for Zoological Nomenclature 295
Financial Report for 1993 296

Applications

Valdivianemertes Stiasny-Wijnhoff, 1923 (Nemertea): proposed conservation. F.B. Crandall 298
Vejdovskyella Michaelsen, 1903 (Annelida, Oligochaeta): proposed precedence over *Macrochaetina* Bretscher, 1899. T. Timm 302
Scottia Brady & Norman, 1889 (Crustacea, Ostracoda): proposed designation of *Scottia pseudobrowniana* Kempf, 1971 as the type species. E.K. Kempf 304
Temnorhynchus Hope, 1837 (Insecta, Coleoptera): proposed conservation. F.-T. Krell 306
BRACHYPTERINAE Erichson, 1845 (Insecta, Coleoptera) and BRACHYPTERINAE Zwick, 1973 (Insecta, Plecoptera): proposed removal of homonymy. P.A. Audisio, R. Fochetti & P. Zwick 309
Sphaerocera Latreille, 1804 and *Borophaga* Enderlein, 1924 (Insecta, Diptera): proposed conservation; *Sphaerocera curvipes* Latreille, 1805 and *Phora flavimana* Meigen, 1830: proposed conservation of the specific names. B.V. Brown & C.W. Sabrosky 312
Coproica Rondani, 1861 and *Ischiolepta* Lioy, 1864 (Insecta, Diptera): proposed conservation of usage by the designation of *Limosina acutangula* Zetterstedt, 1847 as the type species of *Coproica*. T.A. Wheeler & J.E. Swann 316
Bagrus hoevenii Bleeker, 1846 (currently *Hemibagrus hoevenii*; Osteichthyes, Siluriformes): proposed designation of a neotype. M. Kottelat, K.K.P. Lim & P.K.L. Ng. 320
Scomber dentex Bloch & Schneider, 1801 (currently *Caranx* or *Pseudocaranx dentex*) and *Caranx lugubris* Poey, [1860] (Osteichthyes, Perciformes): proposed conservation of the specific names. W.F. Smith-Vaniz & J.E. Randall 323
Lycognathophis Boulenger, 1893 (Reptilia, Serpentes): proposed conservation. H.M. Smith & V. Wallach 330
Loris E. Geoffroy Saint-Hilaire, 1796 (Mammalia, Primates): proposed conservation. A. Gentry, C.P. Groves, J.E. Hill & P.D. Jenkins 332

Comments

On the proposed conservation of the specific name of *Xerophila geyeri* Soós, 1926 (Mollusca, Gastropoda). P. Bouchet; E. Gittenberger 336
On the proposed conservation of *Clavella* Oken, 1815 and *Pennella* Oken, 1815 (Crustacea, Copepoda). D.W. Rice; A. Gentry. 338

Continued on Inside Back Cover

Printed in Great Britain by Henry Ling Ltd., at the Dorset Press, Dorchester, Dorset

ISO
9002